

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

VOL. XVII. No. 10.

ST. JOHN, N. B., MARCH, 1904

WHOLE NUMBER, 202.

FOR THE SCHOOL ROOM.

THE NEW WALL MAP OF ASIA (Colored)

Up-to-date in every respect.
Mounted on Linen and Roller.

Size 6 feet x 5 feet.
Price \$6.00. (Special Price to Schools.)

A NEW SUPPLY OF

Webster's International Dictionaries.

Also, THE COLLEGIATE DICTIONARY.

Especially valuable and convenient for the student and busy man.

Size 7 x 10 x 2 $\frac{1}{2}$.

\$3.00, \$4.00 and \$6.00.

Send for Circulars.

Booksellers and Stationers,

J. & A. McMILLAN,

98 Prince Wm. Street,
SAINT JOHN, NEW BRUNSWICK.

BOOKS NOT KEPT IN STOCK PROMPTLY IMPORTED TO ORDER.

DALHOUSIE UNIVERSITY, HALIFAX, N. S.

◆◆◆◆
**Faculties of
Arts and
Science.**

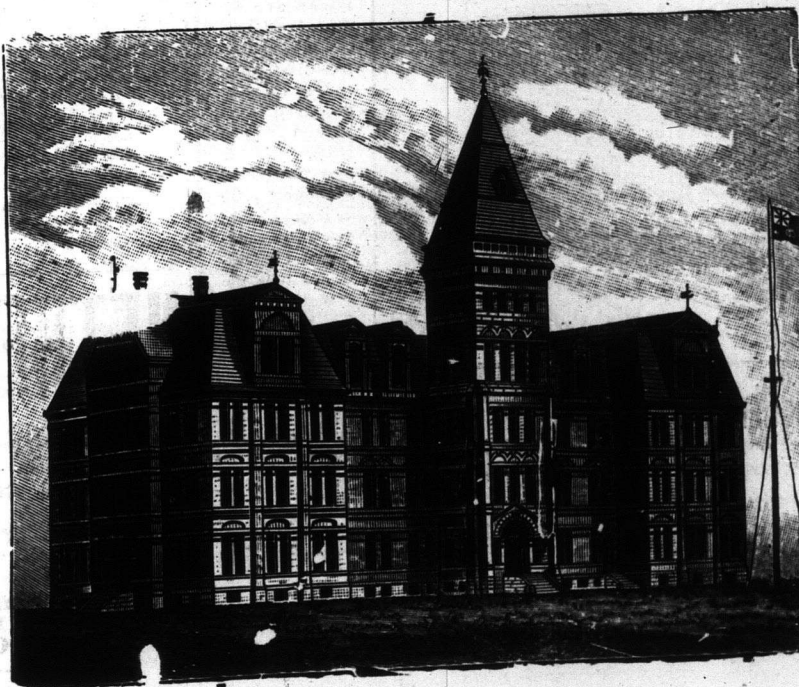
Session begins
September 8th,
1903.

◆◆◆◆
Faculty of Law

Session begins
September 2nd,
1903.

◆◆◆◆
**Faculty
of Medicine.**

Session begins
August 31st,
1903.



◆◆◆◆
**Entrance
Scholarships
in Arts
and Science.**

Open for com-
petition at the
Matriculation
Examinations
in September,
1903.

◆◆◆◆
**Mackenzie
Bursary of
\$200.00.**

Six Scholar-
ships of \$120,
\$120, \$100, \$90,
\$90, \$75.

The Calendar, containing full particulars of the courses of instruction, examinations, regulations, exhibitions, bursaries, medals and other prizes may be obtained by applying to the President or Secretary of Arts Faculty, who will be glad to correspond with any student wishing information.

" FRENCH is the most perfect instrument of human expression and thought that has been fashioned since the Attic of Plato,"

says Sir Frederick Pollock, the eminent English jurist. And the most perfect system that has ever been devised for teaching the language is the

DeBrisay Analytical Method
We teach by mail Latin, French and Spanish
Circulars free.

Academie DeBrisay
OTTAWA and OGDENSBURG N. Y.
(Formerly Toronto and Rochester)

RHODES, CURRY & CO., Ltd.,

.... MANUFACTURERS OF ...

School Desks, Teachers' Desks, Church,
Bank, Store and Office Fittings

BUILDING MATERIALS GENERALLY

AMHERST, N. S.

Branches at HALIFAX and SYDNEY.

FLAGS.

Dominion Ensigns, as per official notice of Chief Superintendent, of January 2nd, 1900.

...ALSO British and St. George's Ensigns, and Fort and Union Jacks of all sizes

Flags With Special Designs Made to Order.

A. W. ADAMS,
North Market Wharf, - St. John, N. B.

BARNES & Co.

Stationers,
Booksellers,

FANCY STATIONERY, LEAD PENCILS, BLANK BOOKS of all kinds.

P. O. BOX 44.

84 PRINCE WILLIAM ST.,
SAINT JOHN, N. B.

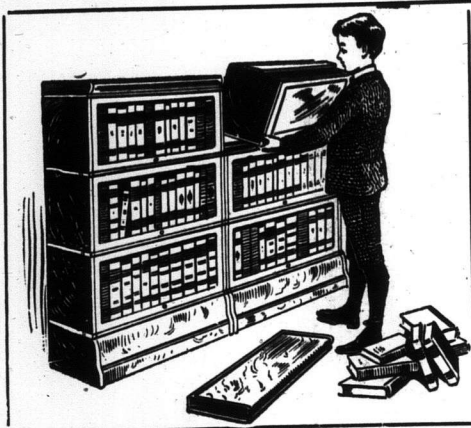


FOR WOMEN

FOR SALE BY
FRANCIS & VAUGHAN, - ST. JOHN, N. B.

SECTIONAL BOOK-CASES. GLOBE-WERNICKE SYSTEM

An ideal book-case for home or office. It is the original sectional bookcase, the best known, best regarded and most extensively used in the world. There is no risk assumed, no experiment in getting a **Globe-Wernicke**. Its reputation is firmly established.



Its good features are unequalled and comprise perfection roller-bearing doors and metal interlocking strips. It's the best constructed and lowest price sectional book-case in the market. But the catalogue tells the whole story and can be had for the asking.

One Unit or Fifty.

Convenient, Ornamental, Elastic.

MANCHESTER ROBERTSON ALLISON, - - ST. JOHN, N. B.

NOW READY

MOYER'S COMMERCIAL AND BRITISH EMPIRE MAP OF THE WORLD

NOTHING like it ever made before. Three COMPLETE MAPS in one—an Ideal Commercial Map, a Complete Map of the British Empire, as well as an Up-to-Date Map of the World. Write for particulars ESTABLISHED 1884.

E. N. MOYER & CO., Map Publishers,

120 Victoria Street, TORONTO, Ont.



NETHERWOOD

ROTHESAY, N. B.

THE ROTHESAY
SCHOOL FOR GIRLS.

PRINCIPALS:

**Mrs. J. Simeon Armstrong,
Miss E. R. Pitcher,
Miss S. B. Ganong.**

Beautiful Location near St. John.
Healthy Home Influences. Limited Numbers,
Careful Supervision

MOUNT ALLISON EDUCATIONAL INSTITUTIONS, SACKVILLE, N. B.

University of Mount Allison College.

DAVID ALLISON, LL.D., PRESIDENT.

THE University of Mount Allison College offers to students, whether desiring to take a full under-graduate course or a partial course limited to special studies, advantages unsurpassed in the Maritime Provinces

The new University Residence has been constructed and is furnished with every provision for comfort, convenience and health.

Annual Session 1902-1903 begins Sept. 25th.

Send for Calendar.

Mount Allison Ladies' College, Owens Art Institution and Conservatory of Music.

REV. E. C. BORDEN, D. D., PRINCIPAL.

INSTRUCTION is imparted on subjects ranging from the primary English branches through the whole University Curriculum to the Degree of B.A. Young ladies studying for the purpose of qualifying themselves to teach may here combine the accomplishments with the thorough drill necessary to their profession. Date of opening, September 11th, 1902.

THE CONSERVATORY OF MUSIC is under the direction of a strong staff of experienced teachers, representing the best conservatories and teachers on both sides of the Atlantic.

Art students have the inspiration which comes from constant contact with the splendid paintings which constitute the Owen's gallery.

Mount Allison Wesleyan Academy.

JAMES M. PALMER, M. A., HEAD MASTER.

NO Institution of learning in the country has had a more successful history, and none is more worthy of patronage for the future. Many of the most prominent men now in professional, commercial and political life in Canada, and in other lands, had their training at Mount Allison Academy. A thorough English and Commercial Education is imparted and students are prepared for College Matriculation and for Civil Service examination. Every care is given to the private interests of the boys, so as to ensure their comfort and happiness. Date of opening Sept 11th, 1902.

The building is commodious, well heated throughout by the hot water system, and comfortably furnished.

Expenses very moderate. For particulars apply to the Principal.

University of New Brunswick.

THE next Academic year begins October 1st, 1903, when Fourteen County Scholarships will be vacant. These Scholarships (value \$60 each) will be awarded on the results of the Entrance Examination to be held July 3rd, at all the Grammar School centres. To candidates who hold a Provincial School License of the First Class an Asa Dow Scholarship (value \$100) will be offered in competition in September. The Departments of CIVIL AND ELECTRICAL ENGINEERING are now open to properly qualified students.

Copies of Calendar containing full information may be obtained from the undersigned.

HAVELOCK COY, ESQ., B. A., BURSAR OF THE UNIVERSITY, FREDERICTON, N. B.

McGILL UNIVERSITY, Montreal.

THE CURRICULUM comprises courses in Arts, Applied Science, Medicine and Law.

Eighteen Exhibitions in the First Year of the Faculty of Arts (value from \$100 to \$300) will be offered for competition in connection with the Matriculation Examination in June, 1904.

Copies of the Calendar containing full information regarding courses of study, etc., and copies of the Exhibition Circular may be obtained on application to

J. A. NICHOLSON, M.A., REGISTRAR.

ACADIA UNIVERSITY AND AFFILIATED INSTITUTIONS WOLFVILLE, NOVA SCOTIA.

ACADIA UNIVERSITY.

T. TROTTER, D. D., President.

The University has a staff of eleven Professors, all specialists in their respective departments. The Arts' Course, constructed on sound educational principles, includes a considerable body of prescribed studies, with a generous range of electives in the Junior and Senior years. The ideals as to methods of work and scholarship are of the highest. Combined with these ideals there is the constant effort to develop Christian character and foster the Christian spirit.

Send to the President for Calendar.

ACADIA LADIES' SEMINARY.

REV. H. T. DeWOLFE, M. A., Principal.

The Seminary provides a full and well-arranged Literary Course, which prepares for Provincial Certificates or Advanced Standing in the University. Students desiring only a partial course can always be accommodated.

First-class instruction is also given in Piano, Violin, and Vocal Music; and in Drawing, Painting, Elocution, Shorthand and Typewriting.

The building is a handsome and commodious structure, with every modern appointment for the comfort and health of the students. The institution is, moreover, a delightful Christian home.

Send to the Principal for Calendar.

HORTON COLLEGIATE ACADEMY

H. L. BRITTAIN, M. A., Principal.

The Academy is a residence school for boys. It is, and has been from the first, a Christian School. It provides five courses: Matriculation Course, Scientific Course, General Course, Business Course and Manual Training Course.

Expenses vary from \$143 to \$175 per annum, according to the number of extras taken. Nine experienced teachers, four of whom are residents, make up the staff.

The Academy Home has recently been fitted with a hot water heating system, and with electric light, and has been made exceedingly and every way attractive and comfortable.

Send to the Principal for Calendar.

KING'S COLLEGE, WINDSOR, N. S.

Courses in Arts, Divinity, Engineering and Science. Numerous Scholarships and Prizes. Course leading to degrees open to non-resident students. Women are admitted on the same conditions, and have the same privileges as men.

THE COLLEGIATE SCHOOL affords an excellent training for boys. Pupils are prepared for matriculation at the universities, and at the R. M. C., Kingston. Good playgrounds and a well equipped gymnasium, in charge of a skilled professional instructor. Calendars of the College and Prospectuses of the school may be obtained from the President of the College, who will readily furnish any information desired.

Edgehill, CHURCH SCHOOL FOR GIRLS. WINDSOR, NOVA SCOTIA.

INCORPORATED 1891.

The Bishop of Nova Scotia, Chairman Board of Trustees.

Miss Lefroy, of Cheltenham Ladies' College, England, Principal.

Ten Resident Experienced Governesses from England. Housekeeper, Matron and Nurse.

Board and Tuition Fees, including French, Latin or German or Greek, Daily Calisthenics,

Class Singing and Needlework, \$25 per annum, or \$75 per term.

Music, Singing, Painting, Drawing, etc., are extras.

Preparation for the Universities.

Michaelmas term begins Wednesday, Sept. 11.

For Calendar apply to DR. HIND.

THE
ROYAL CROWN COPY BOOKS.
 CIVIL SERVICE STYLE.

CONTENTS OF THE SERIES.

No.	No.
1. Initiatory.—Short Letters and Words.	7. Small-Hand.—Full Ruling.
2. Long Letters and Short Words.	8. Small-Hand.—Double Ruling.
3. Text.—Capitals, Words, and Sentences.	9. Small-Hand.—Single Ruling.
4. Half-Text.—Words and Sentences.	10. Text, Half-Text, Intermediate, and Small
5. Text, Half-Text, and Figures.	11. Small-Hand.—Blank. No Ruling.
6. Intermediate.—Words and Sentences.	12. Commercial Forms and Correspondence

Prescribed by the Council of Public Instruction
 for use in the schools of Nova Scotia.

Price, 4c. each.

A. & W. MACKINLAY,
 135 AND 137 GRANVILLE ST., - - - - HALIFAX, NOVA SCOTIA.

ACADEMIC ARITHMETIC

Prescribed for use in the schools of
 New Brunswick and Nova Scotia, **Price 40 Cents.**

KEY TO ABOVE 50 Cents.

HEADQUARTERS FOR



**Text Books for Schools and Colleges,
 School Supplies, Books for
 School Libraries, Etc.**

OUR NEW EDUCATIONAL CATALOGUE IS READY.
 WRITE FOR ONE.

T. C. ALLEN CO., PUBLISHERS,
 BOOKSELLERS, Etc.
 HALIFAX, NOVA SCOTIA.

TWENTY-EIGHT PAGES.

The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

PUBLISHED MONTHLY.

ST. JOHN, N. B., MARCH, 1904.

\$1.00 PER YEAR.

G. U. HAY,
Editor for New Brunswick.

A. McKAY,
Editor for Nova Scotia.

THE EDUCATIONAL REVIEW.

Office, 31 Leinster Street, St. John, N. B.

PRINTED BY BARNES & Co., St. John, N. B.

CONTENTS:

Editorial,	247
Comment on Things Seen and Heard,	248
The Schools of Nova Scotia,	249
English Literature in the Lower Grades,	250
The Use of English,	252
Drawing, No. V,	254
Notes on Mathematics, No. IV,	255
Mineralogy and Geology in Schools, No VI,	256
Walks in the Woods and Fields of Nova Scotia,	258
Bird Study in the Public Schools,	259
Home Made Aquaria for Common Schools,	260
Educational Exhibits at St. Louis,	261
Memory Gems,	262
Hints for the Schoolroom,	263
CURRENT EVENTS,	264
Manual Training,	265
'Round Table Talks,	265
SCHOOL AND COLLEGE,	266
RECENT BOOKS,	236
MARCH MAGAZINES,	

NEW ADVERTISEMENTS—
Webster's International Dictionary, p 269. J & A. McMillan,
First page Maritime Business College, p 267.

A CHANGE has been made in the dates for holding the Dominion Educational Association at Winnipeg. The following note from the secretary explains the reasons for the change: "As the Dominion Exhibition is held this year in Winnipeg, it has been decided to hold the Dominion Teachers' Association at the same time, in order that those attending may have the benefit of the cheap rates, and at the same time may see the most, during the days they spend in the West. The exact dates will probably be July 26th, 27th and 28th. The programme is not yet complete in all its details, and may not be for some little time, but every organized department will be fully represented, and the general sessions will be of special interest. One of the most interesting features of the gathering will be an exhibit of school work and supplies. Those who can assist in this should kindly notify the secretary. The rates granted to the Dominion Exhibition will be published shortly. Everybody can afford to come. There should be a very large attendance."

For the above meeting the Canadian Pacific has agreed on sale of tickets at single fare for the round trip on certificate plan; tickets on sale from Maritime Provinces July 5th to 10th, inclusive, and certificates will be honored at Winnipeg for tickets to return, up to and including August 15th. The return jour-

ney to be made same route as traveled on the going journey. Parties attending to purchase one way tickets, getting standard certificate therewith, and tickets for return will be issued at Winnipeg free on surrender of the certificate properly executed by the secretary. C. B. Foster, D. P. A., St. John, will be glad to supply any further information in reference to the meeting on application.

"THE educational field is, comparatively speaking, the field of the poor," says a writer on the salary question. Many will feel disposed to accept the truth of this sentiment even to the extent of leaving out the qualifying clause.

PRESIDENT WOODROW WILSON, of Princeton University, thinks that the college is no place for the lecturer who merely tries to impart information. He thinks the proper way is to give the student material to work with and let him get the results himself, holding him responsible at examination.

THE National Educational Association of the United States will meet at St. Louis a week earlier than previously announced, from June 28th to July 1st. The change has been made with the belief that more comfortable accommodations can be furnished, and more successful meetings of the convention held at that time, with better opportunities for the study of the educational exhibits, than at a later date.

THE first number of the *Educational Outlook and Literary Review* has been issued at Charlottetown. It is edited by a committee of teachers, with Inspector G. J. McCormac as managing editor, and is the official organ of the Teachers' Association of Prince Edward Island. It presents a very creditable appearance, and has twenty pages of interesting and instructive matter. It will be issued monthly.

THERE is something wrong in our system of rating and paying teachers, when those who have toiled long without proper recognition, who have patiently and industriously prepared themselves for their work have little more salary than the novice in teaching.

ANNAPOLIS and St. John are to celebrate the tercentenary of the arrival of the French discoverers, De Monts and Champlain, in the Bay of Fundy. The week beginning June 20, 1904, will be devoted to pageants and exercises that will celebrate the occasion suitably. The Royal Society of Canada will meet in St. John during that week, and various institutions of learning and historical societies have been invited to send representatives to take part in the celebration.

PROFESSOR D. M. WELTON, of McMaster University, Toronto, died in that city on the 28th February. The deceased was a native of Kingston, N. S., and was educated for the ministry. He graduated from Acadia College in 1855, at the age of 22 years. While he was pastor of his first church at Windsor he filled very worthily the position of inspector of schools for Hants County, Nova Scotia, during the superintendency of the late Dr. Theodore H. Rand. He was afterwards appointed professor of theology at Acadia, and during his professorship spent two years in study at the University of Leipsic in Germany. He was a man of fine intellectual gifts and was one of the leaders of the Baptist denomination in these provinces. In 1884 his alma mater conferred on him the degree of D. D. For the past twenty-one years he had been professor of Hebrew and Old Testament exegesis at McMaster, a position for which his tastes and wide scholarship eminently fitted him.

Two articles on nature-study appear in this number, Mr. Allen's opening talk on birds, and Mr. Swayne's on school aquaria which was promised to the readers of the REVIEW last October. Both are suggestive of spring and of interesting nature work that may be continued through the season.

THE practical questions given in this number by Mr. Richardson should be of great service to the teachers and students who are not afraid of the invigorating stimulus of attacking problems at first hand without the aid of a text-book. The editor recommends this article as an antidote to those teachers who like to see an educational journal filled with problems carefully worked out for them. Reliance on such helps leads sooner or later to the mental stagnation so evident in many schools. The alert scholar always responds to live research methods of work, and learns to doubt the teacher who relies on ready worked out material.

Comment on Things Seen and Heard.

Many teachers give up taking an educational journal when they have most need of it. They write to the editor something like this: "Please stop my paper. I am not teaching this term and have no use for it." But there is a better way than this. A correspondent, enclosing her renewal subscription a few days ago, writes: "I am not teaching now, but I wish to take the REVIEW to help me keep in touch with educational work." This teacher, it is safe to say, will have moved onward a step or two, and will not begin to teach again just where she left off.

A correspondent writes: "Please change the first name in my address from 'Bertie' to 'Bertha.' We cheerfully comply with this request; and hope that the Kitties, the Susies, the Maggies, will immediately rise up and follow her example. Some time ago a school board in the west refused decidedly to receive the application of one Kittie — for the position of teacher, maintaining that the use of the pet name was a confession of weakness and lack of ability to control. Perhaps the view of this board was extreme; but we cannot keep back the notion that if the applicant had been content to be 'Kittie' in her own family and among her young friends, and the more dignified 'Katharine' to a school board composed of strangers she might have got the position.

A reader of the REVIEW in South Africa thinks our teachers would be interested in the examination answers of some of the children there. A class was asked to explain the sentence, "He had got his sea legs on." The interpretation offered was, "All the men put on their sea legs when they came aboard because the water would not spoil them so much." Another child ventured to offer the following use of the period: "A period is after you have explained a whole sentence, as 'God bless you.'" But this is not so bad for children who never hear a word of English except in school, and who are remarkably bright, and show an extraordinary alertness in picking up the English idioms.

Coming nearer home, here are some natural history gleanings from recent candidates for third-class teachers' license:

"The Blood is a watery vapour, in which flows millions of little round blood discs. It is not more red than the water in a stream filled with little round blood fish."

"The cat and the dog have only lower front teeth."

"Woodpeckers among domestic animals have only lower front teeth."

"Squirrels, rats, owls, cats, among domestic animals are perchers."

"Canaries have upper and lower front teeth."

"Cows and horses rise on their paws."

"Iron exposed to damp air will soon begin to *roast*."

"The muscles are fastened to the bones by a liquid called Albumen."

"Some of the domestic animals that swim are the shark the salmon and the trout."

The examiner who quotes the above gems thinks there is room in the curriculum for nature-study. No doubt of it.

That the school master is abroad, and very much abroad, may be gathered from the following references to Canada, still found in text-books used in London schools:

"Haymakers frozen to death in their tents."

"Indians are now quite tame."

"Places where hay-making has all to be done at night time because men dare not face the flies on hot days."

"Summer milk is delivered in solid cakes to customers."

"When once winter sets in the people are frozen up till spring."

As Lord Strathcona himself has directed the attention of the London board of education to these and other stupid blunders in the text-books, there is reason to hope that the British children will soon cease to be regaled on such choice relics. It is interesting to note in this connection the school correspondence that has sprung up between London and Fredericton, N. B., and perhaps other Canadian cities. In these letters the boys and girls of the Empire are showing a disposition to find out things first hand for themselves.

Some have complained bitterly of the severity of the cold and the deep snows of this winter, of frozen water-pipes in cities and impassable roads in the country, and the blocking of freight trains—a loss to trade. But look at the compensations. The covering of snow and the frost which has penetrated the ground to the depth of four or five feet will be worth many millions to the farmers of the country. The snow has protected the roots of plants, especially of grass, and when it melts will leave abundance of fertilizing matter in the ground. The frost, entering every minute cranny of soil, will pulverize it as no amount of cultivation could do. Both these influences will make the work of the farmer less and cause him to rejoice in the bountiful harvests of the coming season. Then there has been less disease this winter, as the germs do not flourish in such steady, cold weather. And look at the fund of joyous, healthy recreation that has been got out of this rough winter in sleigh-driving, skating, snow-shoeing, hockey, curling and other winter sports!

The Schools of Nova Scotia.

The report of Dr. A. H. MacKay, Superintendent of Education for Nova Scotia, has been received. It presents an interesting and complete review of educational progress for the year ending July 31, 1903.

During the year the teachers employed increased by two, although the number of pupils was 291 less than the previous year. The pupils in the three lowest grades increased by 758, showing that the school population is gaining. There were 179 sections without schools, an increase of 24 over the previous year, and 300 schools were maintained with an average attendance not exceeding *eight*. This is a strong argument in favor of the consolidation of schools, which has been started under such favorable auspices at Middleton, where eight sections have been federated.

The number of trained teachers employed increased by 33; and 3,258 high school pupils presented themselves at the provincial examinations, 77 less than in 1902, but 372 more pupils received diplomas than in the previous year, showing creditable preparation and an increased efficiency of the high schools.

The marked progress in manual training was referred to in the last number of the REVIEW. The school gardens increased during the year from 24 to 52, a gratifying feature.

The total attendance at the public schools for the year was 98,768, but the average attendance was only 55,213. This, in spite of many reasonable causes of absence, shows too great a disregard of educational opportunities. The cost to educate this average number was \$16.94 for each pupil.

There are many interesting features in the report, only a few of which we can mention: The schools with an average of eight or less draw as much money from the public chest as those educating five times that number of children; Pictou county has four schools with an average attendance of less than five; male teachers decreased by 44 and females increased by 46 during the year; there are more girls than boys in the kindergartens, but there are more boys than girls in grades one to six; from grades seven to eleven the girls are greatly in excess, being nearly double the number of boys in grades ten and eleven of the high school; salaries show a slight improvement; a number of distinguished university scholars and able teachers in the high schools are

making a good impression on the rising generation; normal trained teachers have increased in the last ten years from 408 to 1077.

The reports of the principal of the Normal school, of the supervisor of manual training, of the supervisor of Halifax city schools, and of the various county inspectors are suggestive, and the tones of encouragement and progress are satisfactory to note.

Dr. MacKay in discussing low salaries places the responsibility where it belongs and gives a warning which should have a far reaching effect on public opinion. He says:

The question of salaries of teachers is one which concerns the people of Nova Scotia generally more than it does the teachers themselves personally; for the teacher can improve his position very simply—and he is doing so—by taking up another occupation. But no matter how modern or ideal the general educational system may be, if it has the one defect of indifferent teachers all the other perfections will avail little. It is plain to every one who thinks that without "living salaries" it is impossible to retain more than a very few able teachers. Under these circumstances it is the people who suffer; for too large a proportion of the clever members of the profession will enter other more remunerative employments. No passing of laws, no dissemination of instructions, no amount of inspection, however agonized the officer may be over his mass of defectives, can produce good results when the teacher is weak. And if the salaries are to remain low, only the weaker, as a rule, will remain in the profession, even should circumstances force many rising individuals to take temporary employment in the service.

President Eliot was arguing in favor of education by "showing how," before the kindergartens. He said that he was learning something every day by being "shown how."

He illustrated his point by describing the training of medical students, and concluded by telling of an old friend of his who had suddenly become deaf in one ear.

"How did it happen?" I asked him.

"Well, I was blowing my nose the other day, when I felt something snap in my ear, followed by an aching and dullness.

"When the doctor came he said the drum was split, and asked how I did it.

"I only blew my nose," I told the doctor."

"Well, had you opened your mouth when you blew your nose you would not now have a damaged ear-drum," was the medico's reply.

"You see, my friend had lived seventy years and have never been shown how to blow his nose," continued President Eliot. The application was appreciated and greeted with a great burst of laughter.—*Boston Journal*.

English Literature in the Lower Grades.

THE PIED PIPER OF HAMELIN.

BY ELEANOR ROBINSON.

This poem was published in Browning's *Dramatic Lyrics*, and is there headed: *A Child's Story*. (Written for and inscribed to W. M. the younger). W. M. was the son of William Macready, the famous actor. The substance of the story is to be found in different works, the accounts varying but slightly. The poet is said to have taken it from a book called, *The Wonders of the Little World: or, A General History of Man*, by Nathaniel Wanley, published in 1675. The prose tale runs as follows:

"At Hammel, a town in the Duchy of Brunswick, in the year of Christ, 1284, upon the twenty-sixth day of June, the town being grievously troubled with rats and mice, there came to them a piper, who promised, upon a certain rate, to free them from them all: it was agreed; he went from street to street, and, playing upon his pipe, drew after him out of the town all that kind of vermin, and then, demanding his wages, was denied it. Whereupon he began another tune, and there followed him one hundred and thirty boys to a hill called Koppen, situate on the north by the road, where they perished, and were never seen after. This piper was called the Pied Piper, because his clothes were of several colors. This story is writ, and religiously kept by them in their annals at Hammel, read in their books, and painted in their windows and churches, of which I am a witness by my own sight. Their elder magistrates for the confirmation of the truth of this, are wont to write in conjunction, in their public books, such a year of Christ, and such a year of the transmigration of the children, etc. It is also observed in the memory of it, that in the street he passed out of, no piper is admitted to this day. If a bride be in that street, till she is gone out of it there is no dancing to be suffered."

Another account, however, published in 1605, gives the same date to the event that Browning gives in his poem, namely, the 22nd of July, 1376. The difference in dates does not matter, for it is hardly necessary to say that the whole story is a myth. Scholars tell us that it belongs to that group of interesting tales based on the characteristics and actions of the wind. The wind blows sometimes softly and sweetly, sometimes loud and fierce, purifies and invigorates, steals things away, breaks, destroys, or kills. It has now the gentleness and weakness of a child, now the strength and fury of a giant. It is invisible, and can go where it will. One old story tells how Mercury, when but a few hours old, stole the cattle of Apollo, the sun-god. When accused, the thief was found in his cradle, protesting that he was but a little helpless thing, that did not even know what cows were. Here

Mercury is the wind who blows away the clouds and then dies down into a gentle little breeze. Goethe's ballad, *The Erlking*, which may be read in Scott's translation, tells how the wind steals away the soul of the child. The fact of the stolen things following the piper, instead of being driven before him, may be compared with the common idea of little children that the trees make the wind.

The whole of Browning's poem is not given in the reader. The conclusion runs thus:—

"Alas, alas, for Hamelin!
There came into many a burgher's pate
A text which says that heaven's gate
Opes to the rich at as easy rate
As the needle's eye takes a camel in!
The mayor sent east, west, north and south,
To offer the piper, by word of mouth,
Wherever it was men's lot to find him,
Silver and gold to his heart's content,
If he'd only return the way he went,
And bring the children behind him.
But when they saw 'twas a lost endeavour,
And piper and dancers were gone forever,
They made a decree that lawyers never
Should think their records dated duly
If, after the day of the month and year,
These words did not as well appear,
'And so long after what happened here
On the twenty-second of July,
Thirteen hundred and seventy-six.'
And the better in memory to fix
The place of the children's last retreat,
They called it the Pied Piper's street—
Where any one playing on pipe or tabor
Was sure for the future to lose his labour.
Nor suffered they hostelry or tavern,
To shock with mirth a street so solemn;
But opposite the place of the cavern
They wrote the story on a column,
And on the great church-window painted
The same, to make the world acquainted
How their children were stolen away.
And there it stands to this very day.
And I must not omit to say
That in Transylvania there's a tribe
Of alien people who ascribe
The outlandish ways and dress
On which their neighbours lay such stress,
To their fathers and mothers having risen
Out of some subterraneous prison,
Into which they were trepanned
Long ago, in a mighty band
Out of Hamelin town in Brunswick land,
But how or why, they don't understand."

So, Willy, let you and me be wipers
Of scores out with all men, especially pipers;

And, whether they pipe us free from rats or from mice,
If we've promised them aught, let us keep our promise!
The poem calls for very spirited reading. The children will notice the funny rhymes, and the fitting of sound to sense, especially in the passages beginning

"And the muttering grew to a grumbling."
and,

"There was a rustling that seemed like a bustling."
The latter passage should be memorized. The prose story may be read to the children, and they should tell what the poet has added in his version. Good subjects for writing upon are "What the Piper looked like," "What the Rat Heard," "The Lame Boy's Vision," "The Plague of Hamelin."

Words and phrases needing explanation:

Guilder.—A Dutch coin, worth twenty *stivers*, or about thirty-eight cents.

Kith and Kin.—Intimate acquaintance and relationship. *Kith*, an obsolete word meaning acquaintance, is now used only in this expression.

Admire.—"And nobody could enough *admire* The tall man and his quaint attire."
Here *admire* means to wonder at.

Train-oil.—Oil from the blubber of whales.

Drysaltery.—A storehouse for dried and salted meats, etc.

Nuncheon.—Luncheon.

Julius Caesar.—The reference is to a story that the famous Roman general, having to swim across a river, held the manuscript of his history of the Gallic Wars (called the Commentaries) above his head with one hand to keep it dry.

Cham.—Pronounced *Kam*. The ruler of Tartary, or land of the Tartars, a group of tribes in the north and northeast of Asia.

Nizam.—The ruler of Hyderabad, a state in India.

Caliph.—The ruler of Bagdad, the seat of the Mohammedan empire, in south-western Asia.

A new school building is to be erected on Hester street, in New York, which will be the biggest in the world. It will occupy a ground space of 75 by 200 feet, and be six storeys above ground, besides a basement and sub-cellar. A hall seating 1,600 will be located in the basement, and altogether the building will accommodate 4,500 pupils. There will be 124 separate class-rooms, and on the top floor will be a gymnasium, kitchen, work-shop, baths, etc. This will be the first school building in New York to have elevators.

In the stock market the "bulls" are those that have something to sell and are anxious for prices to go up; the "bears" are those that want to buy or for some other reason want to see quotations go down.

The Use of English.

To the Editor of Educational Review:

SIR,—What is to be the language of Canadians? Our rulers at Ottawa prefer that it should be the King's English. Some of the clerks there who prepare matter for the press betray their lack of proper training. While teachers complain that the children cannot spell correctly, they themselves have no fixed rule, except, apparently, to adopt as much variety as can readily be devised. The latest abomination appears most popular. I have heard a child tell the parent who offered to help with the "homework,"—"If I spell that word correctly I shall get a bad mark;" and "You must let me pronounce that word incorrectly and I shall try to remember the right way all the rest of the time." And this was in a town that prides itself upon the excellence of its costly schools. As to spelling, surely there ought to be no doubt or difference in regard to the names of Canadian places, yet in defiance of the geographical board and post office department at Ottawa, many of these are spelled and pronounced in an endless variety of ways by the teachers, in the maps and text-books, as well as in the newspapers. Many good old everyday English words are almost, if not quite, regularly mispronounced. For example, municipal, contemplate, and others. Take the spelling of that much used (or abused) word sanatorium. True, the Imperial dictionary allows, though it does not approve of, sanitarium, but Stormonth and others do not. Look at the meanings of sanitary and sanatory, and you can scarcely deny that the slightest regard for the niceties of language would put sanitarium "out of court." Many teachers, and nearly every provincial civil servant, clip such words as programme with an airy disregard of authorities that cannot fail to exert a pernicious influence upon children, and yet when examination time comes these teachers are surprised and amazed to find that their pupils do badly because they have not only adopted but improved (?) upon what the teacher practised. I might go on, but if I have dropped a hint that may lead some of the instructors of Canadian youth to "think (seriously) of these things," I shall have gained all I set out to accomplish.

BACKWOODSMAN'S SON.

Ontario, February, 1904.

Subscribers should read the number on the address of each REVIEW. It shows the date to which the subscription is paid. "202" means paid to first of April.

Drawing--No. V.

F. G. MATTHEWS, TRURO MANUAL TRAINING SCHOOL.

NOTE.—To avoid repetition, references will frequently be made to figures appearing in preceding numbers. It will be well, therefore, for readers who wish to follow these articles to keep back numbers by them.

The drawing of a cylinder resting on its side, although much more difficult than that of the upright cylinder, should be easily understood if the principles of the horizontal and vertical circle have been thoroughly grasped. Fig. 25 represents a cylinder lying on its side on a drawing board. As it is below the eye level the lines $a b$ and $c d$, representing the sides of the cylinder, will slope upwards, and as these sides are parallel, the lines will appear to approach one another, finally meeting in a point on the eye level, the same as the parallel sides of the rectangular planes. The axis $f h$ runs exactly mid-

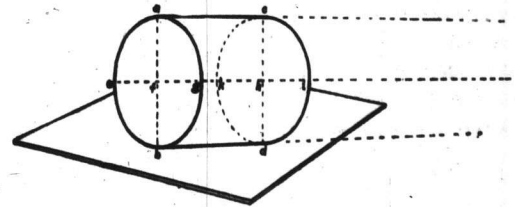


Fig. 25.

way between these lines, and the lines $a b c d$ are at right angles to this axis. The only remaining point to be noted is that the farther ellipse is slightly rounder in proportion than the nearer one. From the above we may easily deduce the method of drawing. First, obtain the general direction of the cylinder represented by its axis. Through a convenient place on this draw a line at right angles to it, $a f b$, making $a f$ equal to $f b$. Compare the breadth of the near ellipse with its height and mark off $e g$, making $e f$ equal to $e g$. Now draw the ellipse. From a and b and tangential to the ellipse, draw lines to the point on the eye level crossed by the axis produced. To obtain the length of the cylinder

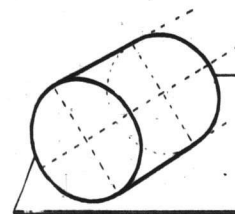


Fig. 26.

compare $a c$ or $g i$ with $e g$. Mark the point c and draw $c d$ at right angles to the axis. As before noted $k i$ is slightly broader than $e g$. Mark these two points and draw the second ellipse. The student should practise drawing the cylinder placed in various positions, and note carefully the changes which occur in each. If the cylinder be turned so

that its circular end be facing the observer the sides *a c* and *b d* will appear much shorter, and the ends will be as nearly as possible circles. Compare Figs. 26 and 27. A common error is to draw the cylinder too long, hence great care should be taken in making comparisons of the various dimensions. Although sloping planes have been left for future discussion, the sloping cylinder may be attempted at once, as the same rules govern the drawing in sloping positions as in the horizontal or perpendicular positions. Figs. 28, *a b c* and *d*, will explain themselves. It may, however, be noted that when the axis of the cylinder appears quite vertical, as in Fig. 28, *c* and *d*, although the cylinder itself is sloping, the long axis of the elliptical ends are quite horizontal. This is the only case in which this can occur.

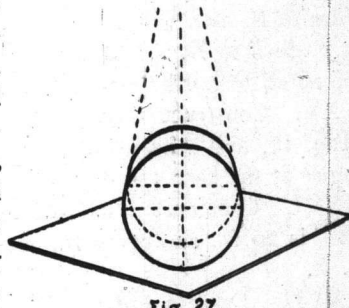


Fig. 27.

Fig. 29 shows a drawing of a ring. As the ring is only a section of a hollow cylinder, it may be well to devote a small space to it here. It will be seen that the upper surface consists of two concentric circles, and the lower one the same. It only remains, therefore, to show how the two are joined. We have seen that the sides of cylinders are *nearly* at right angles to the long axis of the circular end. In the case of the ring or short cylinder, these sides may be considered to be *quite* at right angles, and therefore parallel, hence in drawing the ring, first obtain the ellipse representing the outer edge of the upper surface, then draw *a f* and *b g* at right angles to the long axis of the ellipse. Through *f* and *g* draw a similar ellipse to the upper one. To show the inner edge of the ring two smaller ellipses should be drawn in the same manner, but it will be noted that only a portion of the lower one is seen, and that inside the hollow of the ring.

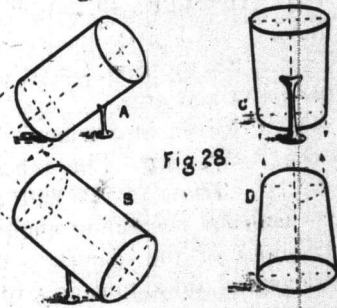


Fig. 28.

Careful study of Fig. 29 will show that each pair of ellipses, being so near together, may be drawn exactly similar. The student may at first be inclined to attempt to draw the upper ellipses, showing the same amount of space between all the way

round. This would obviously be wrong, as a casual glance at the remarks on foreshortening and Fig. 13 would show. Care should, therefore, be taken to get the correct proportions of the major and minor axes of each ellipse independently. Another common error is to forget that the lines *d h* and *a f* are really equal. In no case could *a f* or *b g* be greater than *d h*, yet it is frequently drawn so. (Fig. 29 B.) It is also quite common to find these lines *a f* and *b g* curved, instead of being perfectly straight and parallel, and forming the boundary lines of the lower and upper ellipses alike. (Fig. 29 A.)

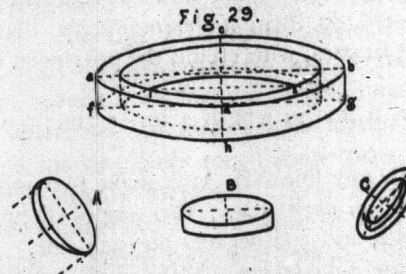


Fig. 29.

But probably the most fruitful source of error lies in not recognizing the fact that *the short axis of the figure bisects every curve*; thus *c h* in Fig. 29 has the same drawing on either side of it. The line 1 2, in Fig. 29 C, is therefore evidently wrong, since the curve ending in these points is not bisected by the short axis of the drawing. A glance at Fig. 29 will show that the line 1 2 should be *parallel* to the long axis. This will be true whatever the position of the ring. It will also be found that the important fact mentioned above holds good not only in rings, but in cylinders, cones, vases and all other symmetrical figures.

Erratum.—In the last article the first line of print under Fig. 19 should be the last line of the column.

When a noted biologist was lecturing on the dangers of bacteria, a Frenchman in the audience said to a German, "He is speaking of germs; now I see where your name comes from."—"No," said the German, "he is speaking of Paris-ites."—"Bedad," said an Irishman who overheard them, "Ye're both wrong. It's Mike-robos they are."

Professor Flinders Petrie, the great British Egyptologist, in a lecture at Paris recently, stated that human history has been traced back in detail 9,000 years, and that Egypt is the seat of the oldest historical civilization, although there are proofs that the forerunners of the races there came from other regions.

I find the REVIEW very helpful indeed. I enjoy its breezy articles very much.

Notes on Mathematics—No. IV.

By R. G. D. RICHARDSON, B. A.

For the March number we have promised a few hints on Mathematical Drawing. Below is a list of problems carefully drawn up and graded in such a way that they may be used for Grades VIII, IX and X of the Nova Scotian and other schools. In general, not more than one problem of a particular type is given, and the teacher can enlarge at pleasure. It is perhaps not too much to say that if Grade VIII can do I—XV, Grade IX I—XXV and Grade X all of the examples, and do them *understandingly*, that they will be able to pass, with credit, the provincial examination.

I. Draw a line in length 4 in.; 5 cm.; 6.9 dm.; 4.75 cm.

II. Draw any line AB. At A make two angles of 17 deg., one on each side. Also angles of 77, 117, 217, 267, 352, and 392 degrees on each side.

III. Draw AB 9.63 cm. Make angles of 90 deg. at A and B on opposite sides of the line. On these lines mark off AC=4.2 cm., BD 6.9 cm. Join CD and measure it. Measure all the acute angles in the figure.

IV. Draw an obtuse and an acute-angled triangle. Measure the angles and sides of each. (Test the angles by seeing if sum = 180 degrees.) Draw perpendiculars from each of the vertices and measure them.

V. The foot of a ladder leaning against a house is 19 feet from the base of the house, and reaches up 29 feet on the side of the house. Find length of ladder and angle of elevation with the level ground.

VI. A triangle has sides 30, 40, 35. Find angles and length of all perpendiculars from the vertices. Find area in three different ways.

VII. A man tramps 49 rods north and then 57 rods east. Find distance he has covered in a straight line and the angle made with the north direction.

VIII. Two sides of a triangle are 75 ft. and 42 ft. and contained angle 169 deg. Find other side and angles and area.

IX. If two houses are 90 ft. apart, and a rope is stretched from one window in first house, 41 ft. high, to window in second house, 11 ft. high, find length of rope, provided the windows are exactly opposite each other.

X. Two islands, B and C, are distant from a lighthouse A, 5 miles and $3\frac{1}{2}$ miles respectively. The angle at A is 39 deg. Find distance BC.

XI. A town B is 14 miles due east of another town A. A town C is 19 miles from A and 17 miles from B. How far is C west from A? How far north?

XII. Find area and angles of a triangle whose sides are 171.5, 92.3, 280.4.

XIII. Two houses A and B are 1728 ft. apart. Find distance of a third house C from A and B, if $\angle BAC = 47$ deg., $\angle ABC = 57$ deg.

XIV. A ship starts from A and sails north 40 miles to B, then west 15 miles to C, then northwest 11.7 miles to D. Find distance AD and direction compared to north (north X deg. east.)

XV. Construct a parallelogram whose area is 48 sq. ft., and whose base is 8 ft., and one of the angles at the base 119 deg.

XVI. Construct a parallelogram, one of whose sides is 20 ft., another 8 ft., and whose area is 100 sq. ft.

XVII. Draw a square of 7 cm. Draw a rhombus with length of side the same and one angle 45 deg. Find difference in area, if any.

XVIII. Two steamers sail from same port at same time. The first sails N.W. 12 miles per hour, the other W. 67 deg. S. at 17 miles per hour. How far apart are they at end of 3 hours.

XIX. Find number of acres in a plot of land bounded as follows. From A north 25 rods to B, then northeast 10 rods to C, then east 14 rods to D, then south 20 rods to E, thence to A.

XX. In the following construct both triangles, if possible, and measure the remaining parts and the area of each:

(a) AB=79 ft., BC=53 ft., A=39 deg.

(b) AB=69 ft., BC=89 ft., A=129 deg.

(c) AB=60 ft., BC=30 ft., A=30 deg.

(d) AB=14 ft., BC=19 ft., A=79 deg.

XXI. ABCD is a quadrilateral. Given AB=4.1, BC=5.1, B=139 deg., C=93 deg., A=76 deg. Find other parts and area.

XXII. Given in a triangle ABC, AB=47, A=72 deg., C=59 deg. Find other parts.

XXIII. Draw a circle with radius 4.2 cm. Draw two diameters containing angle of 60 deg. At the extremities of the diameters draw four tangents. Find angles, sides, and area of resulting figure (a rhombus.)

XXIV. Draw a rectangle 4 in. by 3 in. Take middle points of sides and connect them in order around the rectangle. What is the resulting figure? Find its area. What fraction is it of the original area?

XXV. The shadow of a vertical cliff 113 ft. high just reaches a boat in the sea 93 ft. from its base. Find altitude of the sun in degrees.

XXVI. A rope 38 ft. long just reaches to the ground when fastened to the top of a tree 29 ft. high. How far from the foot of the tree does it touch, and what angle does it make with the level?

XXVII. ABCD is a quadrilateral. $AB=42.1$, $BC=49.6$, $BC=37$, $CD=49$, $AC=60$. Construct and find area.

XXVIII. Find area of plot of land bounded as follows: From A, N. 69 deg. E., 47 rods to B, thence N. 21 deg. W., 20 rods to C, thence S. 89 deg. W. to D. Thence to A.

XXIX. Draw a regular figure of eleven sides each side 1 inch long.

XXX. In a quadrilateral ABCD, given $A=60$ deg., $AB=6$, $BC=7$, $AC=9$, $BD=6.5$. Find other parts.

Yale University, February 29th, 1904.

THE National Union of Teachers in England and Wales has just affiliated the Sierra Leone Teachers' Association. Projects for the affiliation of other teachers' associations within the British Empire, with the great central Union of Teachers in England and Wales, which contains more than 50,000 members (three of whom are members of the House of Commons) are under consideration. More than 300 members of the N. U. T. are members of the County and Borough Educational Committees under the English Educational Act of 1902. The address of this comprehensive and powerful union is Bolton House, Russell Square, London, and the secretary is Mr. J. H. Yoxall, M. A., M. P.

Though not in active work of teaching now, I am pleased to note the steady improvement, widening influence and increasing helpfulness of the REVIEW, which I read with interest every month.

Sackville, N. B.

C. E. L.

A man named Mason is advocating the introduction of what he calls his "cosmo-Roman alphabet." He would strike out twenty-one of our present letters and adopt twenty-four new ones, each of which would stand exclusively for one definite sound. He would use the dollar sign to express the sound of "sh." We should welcome anything that would reform the foolish system of English spelling, but it seems to us that the dollar already stands for too much, and we don't believe the agitation will accomplish anything.—*Exchange*.

Mineralogy and Geology in Schools — No. VI.

By L. A. DEWOLFE.

The last paper dealt with uses of a few of the more common minerals and rocks, and suggested blowpipe work and the teaching of mineralogy and geology in connection with geography. In high school work I should also make these subjects the basis of chemistry. As chemistry is usually taught, all the materials are artificially prepared. This fact itself destroys half their interest. Rather take the mineral in its natural state and see how these various salts could be prepared. After that is learned, one may use the drug-store material for convenience. If the child can take, say, a piece of copper ore, reduce it to metallic copper, and dissolve this in *nitric acid* to form *copper nitrate*, the substance is his own very much more than if he had bought it already prepared. Tests for the metals learned in mineralogy are of use in later work in chemistry. Flame tests are valuable not only as tests. The boy no sooner sees the crimson *strontium* flame than he remembers the color in red fire-works. He'll now want to know what gives the other colors in fire-works, and what makes the sparks. Bead tests make him familiar with the coloring of glass. Cobalt blue will not be new to him the first time he sees it in a borax bead. These color tests also furnish a text for a lesson on gems, for gems are only naturally colored minerals.

If in your mineral collection you have a suitable group set apart as an illustrative *scale of hardness*, beryl and corundum may find a place among them. They are sometimes stained so as to be suitable for gems. The rich green beryl known as emerald is stained with chromium, and the paler variety with iron. The gem form of corundum is sapphire, which is also probably stained with chromium. Besides the gems, one can teach uses of the impure varieties of the same mineral. For example, emery is an impure black form of corundum. Why is it suited to its use in emery wheels? Powdered garnet is sometimes substituted for emery, and is used in making sandpaper. A better variety is used for jewels in watches, while the best is the gem usually known as carbuncle. It is not difficult to find small garnets in granite suitable for school specimens.

Just as we gave an outline of the origin of rocks and soils in a previous paper, so should we give talks on the origin of the useful minerals. (Distinguish

mineral, metal and rock). The different ores of iron, for instance, might be traced to bog iron ore, the deposition of which one readily sees in stagnant pools and ditches. To give an idea of the rapidity of deposition, one need only mention that in Sweden some lakes are dredged every thirty years, and yield bog ore in paying quantities. Where did this iron come from? Is the saltness of some inland lakes an analogous case? Ochres naturally come in with the other iron compounds. So does iron pyrites and copper pyrites, which are mined, not for their iron, but for their sulphur, and hence for sulphuric acid.

The origin of other minerals can be taken up in the same way. Use illustrations when possible. For example, the formation of zeolites in the North Mountain trap is intelligible when we read of the finding of old Roman bricks in which the pores formed by weathering were filled with zeolites. Tell the child the composition of zeolites, and, since he already knows the general composition of bricks and of igneous rocks, he can draw rational conclusions as to their formation in all cases. Would he be liable to find them in sandstone?

The introduction of the North Mountain trap gives a chance for a talk on lava flows in general. It is interesting to know that gold and tin are often obtained from the beds of ancient rivers which are now buried deeply beneath lava. Obsidian, pumice stone, amygdaloidal rock, etc., give an idea of how this lava appears at present.

But it is unnecessary to multiply instances of things that an earnest teacher will teach. Every common metal or salt has a history. Study what both nature and art did for it. The child knows that silver is used for coins, table ware and jewelry, but perhaps he does not know of its use in mirrors or photography. Every day he sees cloths of many colors, but he has never inquired of the materials used in dyeing or calico printing. The colors on his dinner dishes are perhaps pretty, but that is all he knows or cares about them. Even the dishes themselves had no beginning until you question him about them, and then all he could tell you is that "they were made."

I leave these few suggestions for others to add to as they see fit. I have followed no regular plan laid down according to psychological rules. Such a plan, if there be such, would require all the material on hand and arranged at the beginning, and consequently result in mechanical or artificial

efforts, tiresome alike to the pupil and the teacher. The only pleasant way that I know of for this work is to take advantage of opportunities whenever they offer themselves. When a mineral or a geological fact is before us, study it, whether we have studied other minerals relating to it or not. If your knowledge must be in definite form, re-arrange your facts after you have learned them.

Walks in the Woods and Fields and Pastures and by the Waysides of Nova Scotia.

By R. R. McLEOD.

February 10, 1903.—Clear skies and keen air; under-foot six inches of snow. Went about a hundred rods from my door across the main road, at the church, into a bunch of pines and hemlocks of ancient growth, wherein I am almost sure to see or hear some living creature that is not human. It is a kind of halting place between the lower reaches of the river where there are no clearings, and the upper and western side of the road among the pastures and fields and fence-corners. On this afternoon there was neither sight nor sound of wild life. Coming to the lower margin of the wood where there was a bit of overflowed meadow, I notice frozen in the snow, here and there, a feather of the ruffed grouse, or commonly called hereabouts "birch partridge." Further across the ice was almost a handful of feathers in a bunch and stuck fast to the snow, into which they had thawed and afterward frozen; this item is important to my story. I soon followed the feathers back into the edge of the woods to a nest-like cavity in the snow beneath a small yellow birch tree. On that spot had been enacted a woodland tragedy such as are the commonplaces of Nature. Reading the signs, the affair runs in this way: Early in the afternoon of yesterday a partridge was feeding on the buds of the yellow birch, to which they are all very partial. Having satisfied her hunger she came to the ground and scratched away the snow from the turf that covered a half sunken boulder, where she found a checker-berry leaf or two, and then sat down to take her ease in the shadows of the old evergreens as if there were no enemies in the world. In fact she had but little to fear for the owls were not out in the broad daylight, the wild-cats for the most part were in hiding. All the day-birds of prey had gone southward but one species, and he was not a common bird by any means. From foxes and weasels there was danger in sleeping there or even nodding. The unexpected happened

as it so often does. Our winter falcon, the fierce goshawk, that had been slashing the keen air with his strong wings, dashed through the pinery unperceived by the drowsy grouse and grappled her in his sharp crooked talons almost without stopping his flight, for there was no sign of resistance beyond a wing mark on the snow. Away he bore her, struggling and parting with her feathers, but all in vain; from those claws no bird had ever escaped. Let us consider the signs that tell the story. Had it been at night the partridge would have been roosting on a limb, and not sitting in a cavity in the snow. It happened when there was no wind, otherwise the feathers would have been blown far and wide, also the feathers would not have been thawed down into cavities without the bright sun at this winter temperature. The afternoon of the day before I came, exactly answers the conditions; the day before that was cloudy and squally.

If the hawk had not made a prize of her, there is evidence that a weasel might have feasted on her, for his tracks betrayed his presence the same afternoon on the very spot, where he smelled of almost every feather as if he could hardly believe the evidence of his eyes that so fresh a scent did not lead to a square meal for him thereabouts. Had he found the drowsy bird he would have crept unperceived upon her, greatly favored by his white coat; once within reach, by a single bound he would have her in jaws of immense strength for so small an animal; and while the scuffle would have been vigorous even to the bird flying away with him, still there could be but one ending to the contest, and that was death to the grouse. Any person may see that the stupidest partridge would be the one to fall a victim to the enemy; and thus the more clever individuals are continually preserved. It is equally true that the prizes will fall to the swiftest and most intelligent hawks and owls, provided that their eyes and ears are of the best. Only the choicest weasels will be able to secure meat enough to answer their purposes. The loss of an eye to a weasel or the slightest deafness to an owl would shorten his days.

In spite of all alarms, and occasional hardships, and continuous bloodshed, one is warranted in the belief that the beasts and birds find life fairly enjoyable. They do not know that it is ever to have an ending. No thought of death has ever disturbed them. The evils to come are not considered. Their fears are soon quieted, and with a fair share of food, life is doubtless worth living.

To go on with my walk: I followed the river,

now closed with ice a foot in thickness, half a mile to the hardwood hill where I took the shelter of a fringe of ancient hemlocks that had appropriated a narrow strip of ground at the junction of the hill and swamp that forms the margin of the river. I have taken my readers over this favorite bit of woods when the flowers were in bloom, and the mating birds were full of song, but now all has changed. There is no sound but the muffled roar of the wind as it takes the tree-tops, and the harsh crunching of the crust under foot that is hidden beneath the lighter snow. This is a locality where

owls find congenial quarters amid the sheltering branches of the hemlocks, and many times have I disturbed them as they dozed away the daylight in these dim retreats. Hidden by the tree-tops and high in the air a raven is wrestling with the keen stiff north wind and reports his presence by now and again crying *ou-u*, with a long-drawn accent on the second syllable, and varying it with a hoarse croak that has never been taken to mean any good



to mortal man. Hunger is driving this black speck across the sky in search of food; perhaps he knows where it can be found and has it in view from his lofty lookout. Among the farmers there are occasional deaths among their cattle, sheep, and horses, and the carcasses are dragged away to the woods or pastures where they become bonanzas for the ravens, especially in the cold season when there is but little more to be had. In the warm weather there are young birds and reptiles and frogs, and a chicken here and there, but the taint of decay is no objection in the raven's estimation.

At this point I turned homewards as I had no disposition to go faster than needful to keep myself warm; indeed it may be truly said that he who runs on these occasions will never read much of what

can be gained by a very slow pace. There are always interesting objects to be seen if we care to look after them. Hollow trees are attractive to me. They are the natural houses and nesting-places of many beasts and birds. In winter they shelter families of flying squirrels, and there the red squirrels often make their warm nests of moss and dry leaves. In them the owls find an opportunity for nests. Some species of butterflies hide away there for the winter. Sometimes there are openings near the ground, and with a few blows of my hatchet such a place may be readily enlarged. Before I got out of this woods an ancient beech invited me to overhaul its cavity within my reach, and I was repaid by discovering a living butterfly clinging in a torpid condition to the dry and sheltered interior. It was the species known as the "Mourning Cloak," or *Antiopa vanessa*, that may be seen common enough in the very early spring before even the arbutus is in bloom. They have wintered in safety and take the first opportunity to get abroad again. Their offspring will not appear till later, and they may be known by their brighter and newer aspect and their unbroken wings. This species need not be confused with any other, as its dark velvety wings, about two and a half inches across, bordered with whitish buff, make it conspicuous both in size and color. The little creature had crawled into this dark shelter and taken a grip of the decayed wood, and there it was motionless and insensible to all its surroundings. A slight warmth would have set in motion the torpid machinery, but it would be a perilous awakening on such a day, so I left it undisturbed; later on some day after the summer has come, a little bird will strip it of wings and legs and feed her infant brood with the wonderful body that defied the rigors of winter to so small a purpose. As a rule the butterflies perish through the summer and fall, but two or three species at any rate withstand the cold season.

Enough of this; my shadow stretched out rods in length across the snow as I faced the setting sun, and so there was no more sight-seeing for me that day; but I hardly dare look to right or left lest some other object detain me while the twilight creeps over the land.

Our usual sketch and portrait of a Canadian author is unavoidably held over for this number. We are glad to hear that these sketches, with the extracts from the authors' works, are appreciated by our readers. Next month the subject will be the late Theodore H. Rand and his contributions to Canadian literature.

Bird Study in the Public Schools.

BY E. C. ALLEN, YARMOUTH, N. S.

One of the most interesting, but sadly neglected, divisions of nature study is the study of our native wild birds; and such questions as "How shall we interest the children in the birds?" heard so often from teachers of my acquaintance, have caused me to suggest a few ways which I have found useful in my own limited experience. Now as a matter of fact we do not have to expend any great effort in interesting the children in birds, for it is well known that the average child has a great deal of natural curiosity concerning living wild creatures. It is our duty to train this curiosity into some degree of usefulness in observing nature, and help the children to put their observations into systematic form. To do this it is quite necessary that the teacher should be familiar with as many as possible of our common birds.

Accordingly, I have prepared a number of short descriptions of our more common birds, which I trust will be helpful to readers of the REVIEW in identifying them. These descriptions, it will be understood, are for the identification of only living wild birds as seen in field or wood, and are simply collections of the most striking characteristics of the birds as thus seen, and for that reason should aid the observer to identify a bird on sight. The descriptions will appear later and will be followed by a simple, practicable key to our more common birds.

Now as to the study of birds in school, I have found the following method very satisfactory. At some time very soon after the opening of the school term in the fall, I form a list of all the birds that the scholars are acquainted with, incidentally teaching them to apply the proper names to their acquaintances, *e. g.*, tern instead of "mackerel gull," song sparrow instead of "chippen bird," etc. With this list, which is added to as the scholars become acquainted with new birds, I keep what we call the bird register, calling the bird roll each morning after the regular roll-call, for the day before, the scholars answering for the birds by raising hands as I name the birds, to indicate that they have observed them on that day. On Monday morning it is necessary to call the roll for Friday, Saturday and Sunday. The register is ruled in squares, after the fashion of the school register, the names of the birds running along one side, and the days of the month

along the other. Thus a straight mark abreast a bird's name, and under a particular date, indicates that the bird was observed on that day. Other marks may be used which will make the record more interesting and valuable, e. g., F when a flock is seen, S if the bird observed is in song, N if the bird is nesting. It takes about five minutes to rule a form that will do for a month, and about two minutes to take the observations each day.

The value of these records must be obvious. After the fall migration is over, it is a simple matter to look over the lists and find which birds disappeared, and the last date on which each was seen, thus getting a list of the summer residents, with their approximate time for going south. The remaining ones form the list of permanent residents. Later in the winter the visitors from the north, such as the pine grosbeak, snowflake, horned lark, etc., will appear, and a list can be formed of these, probably a small one. In fact the value of these records can hardly be calculated. Among the facts that can be deducted from them are the statistics asked for concerning birds in the nature observations in Nova Scotia.

Incidentally, in these morning talks, questions will come up concerning the habits of the birds, questions that will doubtless sometimes puzzle the teacher to answer. In such cases, do not be afraid to say that you don't know. However, endeavor to find out, and you will have the sharp eyes of the boys and girls to help you.

Last year, says the *Pathfinder*, we published the problem which has become a household saying throughout the land—"How old is Ann?" It seems that this problem is causing trouble in one Kansas school district. The teacher figured Ann's age as 18. One of the pupils took the example home and put it to his father, who was a school trustee, and the latter made Ann out to be only 12.

The question of a woman's age has many times in history caused trouble. In this case the trustees say that anyone who reports a young lady to be six years older than she really is, is no fit person to teach school. The teacher has appealed to the county superintendent. And there the issue stands.

For those who would like to come to their own conclusion as to the days of the years of Ann, we repeat the momentous question here:

Mary is 24 years old. Mary is twice as old as Ann was when Mary was as old as Ann is now. How old is Ann?

Home Made Aquaria for Common Schools.

By J. M. SWAYNE, PRINCIPAL ANTIGONISH N. S. SCHOOL.

Living animals should form a very important part of the school collection. One result of our nature teaching should be that the children know and love the wild things in the world out-doors. That they know the number of joints in a grass-hopper's leg, or the names of the veins in a butterfly's wing is not important; but it is important that they know the habits and the life-histories of the common animal forms about them. If our aim in this part of our nature work is to "help the children to know and love the animals," this part of our nature-work will be a success. It is only necessary that we introduce them; the acquaintance will soon ripen into a life-long friendship.

As we may take the children to the field but a few times in the year, we need to bring as much of nature as we can to the school. In caring for animals in captivity, problems arise which are sometimes difficult to solve, and as we have had a number of aquaria in our school for the past year, it may help some beginners if I give the results of our experiments.

We have one aquarium made from a tub. It is not at all beautiful, but has been very successful as an aquarium. In preparing another of this kind, I should proceed as follows: Procure a strong, clean tub, about fifteen inches deep. If higher, the walls cut off too much light. Soak it well to be sure it is water-tight, and thoroughly clean; and have the boys bring enough clean sand from the bed of a brook, or elsewhere, to cover the bottom with a layer about two inches in thickness. The sand should first be washed till the water from it runs off clean. The water for filling may, preferably, be brought from a clear pond, or ordinary tap-water may be used. The tub should be nearly full. Any of the common water-plants may be used to preserve the balance. Those most in use for this purpose are,—Nitella and Chara, Sagittaria (Arrow-head), Utricularia (Bladderwort), Lemna (Duckweed, Ceratophyllum, Myriophyllum, and various algae (pond-scum). For the large aquarium I should use Sagittaria and Duckweed. The former should be planted in the sand; the latter, of course, floats free.

In this aquarium I should keep the larger forms, as: A frog, eggs and tad-poles of frogs and the toad, a few small fish, a fresh-water clam, and a number of water-snails and water-insects. For these the water must be a foot deep, and there must be

plenty of plants. Water-insects must be supplied to feed the frogs and fish. A bunch of water-moss or chara will contain many small forms. A bit of wood should be floating on the surface for the frog to climb on. Only very small fish can be kept in a still-water aquarium of this size, and not many of these. Any of the smaller minnows, stickle-backs, and very small trout generally do well.

There must be no organic matter left in the tub to decay, or a fungous disease will be sure to attack the fish and polliwogs and even the frogs. It appears as a bunch of white threads, spreading rapidly, and killing the animal attacked in a very few days. I know of but one method of getting rid of it,—cleaning out the aquarium and setting it up anew.

Ferns may be grown in pots arranged round the tub to hide its homely appearance. Two of these aquaria would prove an interesting addition to every school not able to afford more expensive ones.

We have used a tank of tinned iron in our school with good results. It was left, properly balanced, last July, and the fish and snails were alive and well when school opened after holidays, though the water was actually red with iron-rust.

For small aquaria we use pickle and battery jars. They are very easily arranged. Put in a little clean sand, and fill nearly to the top with water. I generally use duckweed to balance these small aquaria, but pond-scum or chara will do nearly as well. These small jars can supply oxygen for only a few animals. One combination might be,—a small fish not over an inch and a half in length, a tad-pole, a caddice-worm, and a water-snail. By varying the arrangement and species, a dozen jars will make a fairly good collection. If nicer dishes are desired, round glass globes may be obtained through any crockery dealer. A Samson battery jar makes a very nice aquarium.

When a glass aquarium has been correctly balanced, that is, when there is just the right proportion of plants and animals, it should be covered to keep out the dust, and may even be sealed, and will need no further care for months, provided arrangements for food have been made. The plants should supply enough oxygen for the animals, and the latter must breathe out sufficient carbon dioxide (CO₂) for the plants. If the animals have not enough oxygen they will stay near the surface; if the plants have not sufficient CO₂ they become yellowish, and in either of these cases a change must be made. It is better to have too few than too many animals. In keeping

animals in captivity we must make their surroundings as much like those to which they are accustomed as possible. Forms from a clear stream will not live in a stagnant pool; and it is because the conditions in nature are so varied that so many forms are hard to keep within doors. For a successful aquarium the one guide is nature.

Educational Exhibits at St. Louis.

Are you trying to make all your American school children grow up into Verestchagins, Munkacsys, Michaelangelos, or Raphaels?" inquired a Russian school teacher at the Paris Exposition of 1900. The question was addressed in all seriousness to Miss Minnie Bronson, who was connected with the American educational exhibit at Paris. The Russian teacher was inspecting the many rude drawings in the exhibit from the kindergarten schools of the United States. There were pictures of horses having four legs, no more and no less, and pictures of hens with exactly the number of legs that belong to a chicken. Except in this feature the drawings did not look particularly like horses or hens.

"We do not have our kindergarten children study drawing in the hope that they may become great artists," replied Miss Bronson. "Our object is to develop the power of observation in the children. You will observe that the child who draws a horse with four legs, instead of three or five, has paid attention. We find that this method of teaching is worth much to the little ones, in developing their imagination and power of observation. It is not our intention to make artists of them, but to make them close observers."

At the St. Louis World's Fair there will be a most comprehensive kindergarten exhibit one of the most interesting features of which will be a model kindergarten school in operation, to demonstrate the earliest stage of teaching in the American public school system. A corps of skilful kindergarteners will give daily instruction to classes of little tots from St. Louis homes. Every feature of kindergarten work is to be shown, and at all times the school will be open to visitors.

The Missouri World's Fair commission is building a model schoolhouse, to cost \$1,200. It is believed that school-boards will be astonished to learn what can be done with that sum of money. The structure will be a one-room house, costing \$800 or \$900, the remainder of the appropriation to be

spent on the furnishing. Model systems of heating, lighting and ventilation will be installed. A Missouri rural school exhibit will be given in this school room. The little red school house still flourishes in Missouri and other states, but the present-day rural schoolhouse, if not built of brick, is neatly weather-boarded and properly plastered.

One of the finest state exhibits in public school work will come from Massachusetts. New York State and New York City will make comprehensive displays. All the states are vying with one another in their efforts to show the excellence of their public schools. From Alameda County, Cal., will come a school exhibit that will equal that of some of the states. For this exhibit \$20,000 is being spent. The educational exhibit at St. Louis, as a whole, will be more complete and comprehensive than any that ever has been attempted at any exposition. Here for the first time in the history of expositions one of the main exhibit palaces is devoted to educational exhibits. Furthermore, education is placed first in the list of the chief divisions.

A Provincial S. S. Tour.

The provincial tour is a new departure in connection with Sunday-school work in New Brunswick, and is attracting much attention. Every county in the province is to be visited and a convention held at some central point therein. The prime purpose is that the tour shall be made educative in its effect, while at the same time being made to conserve all the other vital features of Sunday-school interests.

The time of the tour is fixed to extend from May 9th next to June 8th inclusive. All counties have been consulted through their executive committees, and practically all have endorsed the general plan of the tour, and either guaranteed or expressed confidence that the amounts apportioned them to meet expenses will be forthcoming. The workers of the "Tour Party" will consist of Mr. Alfred Day, formerly Field Secretary of the Ontario S. S. Association; Mr. I. H. Meredith, of New York, musical evangelist, who will have charge of the music and song services of the tour; and Rev. A. Lucas, retiring Field Secretary of the N. B. S. S. Association. Probably in addition to the above a primary worker will be one of the party.

The important thing is not so much that every child should be taught, as that every child should be given the wish to learn. A boy who leaves school knowing much, but hating his lesson, will soon have forgotten almost all he ever learned, while another who had acquired a thirst for knowledge, even if he had learned little, would soon teach himself more than the first ever knew.—*Sir John Lubbock.*

Memory Gems.

March nodded to winter, "good-bye, good-bye,"
Off to your home in the south you must fly;
Or have you forgotten that under the snow
The wee weeds are waiting, yes, waiting to grow?
—*Selected.*

Be good, dear child, and let who will be clever;
Do noble things, not dream them all day long;
And that will make your life and work forever
One grand sweet song.
—*Kingsley.*

Did you tackle the trouble that came your way
With a resolute heart and cheerful,
Or hide your face from the light of day
With a craven soul and fearful?
Oh, a trouble's a ton, or a trouble's an ounce,
Or a trouble is what you may make it.
And it isn't the fact that you're hurt that counts,
But only how did you take it.
—*Selected.*

The music that will farthest reach
And cure all ill, is cordial speech.
—*Emerson.*

The leaves to-day are whirling,
The brooks are all dry and dumb;
But let me tell you, my darling,
The spring will be sure to come.

There must be rough, cold weather,
And winds and rains so wild;
Not all good things together
Come to us here, my child.

So when some dear joy loses
Its beauteous summer glow,
Think how the roots of the roses
Are kept alive in the snow.
—*Alice Cary.*

Waste not moments, no, nor words,
In telling what you could do
Some other time; the present is
For doing what you should do.

Don't do right unwillingly
And stop to plan and measure;
'Tis working with the heart and soul
That makes our duty pleasure.
—*Phoebe Cary.*

When'er a noble deed is wrought,
When'er is spoken a noble thought,
Our hearts, in glad surprise,
To higher levels rise.
Honor to those whose words or deeds
Thus help us in our daily needs,
And, by their overflow,
Raise us from what is low.
—*H. W. Longfellow.*

The non-observant man goes through the forest and sees
no firewood.—*Russian Proverb.*
Some observant people go through the forest and
see only firewood.

A Tragic Calendar.

Jan-et was quite ill one day;
 Feb-rile troubles came her way.
 Mar-tyrlike she lay in bed;
 Apr-oned nurses softly sped.—
 "May-be," said the leech, judicial,
 "Jun-ket would be beneficial."
 Jul-eps, too, though freely tried,
 Aug-ured ill, for Janet died.
 Sep-ulchre was sadly made.
 Oct-aves pealed and prayers were said.
 Nov-ices with many a tear
 Dec-orated Janet's bier.

—Carolyn Wells, in *Life*.

Hints for the Schoolroom.

In my room a year ago, I had to deal with two of the so-called bad boys. Packed full of mischief and activity, but bad—never! A few days' experience with them convinced me that they were boy problems such as I never had had to face before, and would need an entirely new method of governing if we wanted a harmonious year. So I planned to anticipate all their schemes—to give them something else to think of before the mischievous idea could be put into execution. I invented numerous errands, sent many needless notes, got them to help me do all kinds of school work much of which I had to do over myself after school. Every day in planning my work I would regularly arrange for five or six things for my "imps," as the principal called them, to do for me, in order to occupy every second of their time. Eternal vigilance proved to be the price of my liberty and although the boys never turned into saints yet they forgot a great many annoying tricks.—*Popular Educator*.

I am teaching a small school in the country, just one mile from my home. I have learned a few things in the past month, and, thinking that other teachers might be helped thereby, I send them along. A suitable boarding-place near the school could not be found, and my health would not permit me to get along with a cold lunch for a dinner. For a long time I did not know what to do, but at last a remedy was found. I took an oil stove to school, and, having not only received a training in teaching, but an equally systematic course in housekeeping (with mother as teacher, however), I am having a good hot dinner at noon. No need of a cold lunch, teachers!

Another hint: From cloth which served as curtains to the windows last year, I cut pockets, and tied a pocket to each desk. The cloth only cost me one cent a yard, and I made six pockets from each yard. There is no more waste paper on the floor or in the desks, nor is there any running to the waste-paper basket.—*Teachers' Institute*.

The following device has proved useful to the writer for busy seat work in the primary grades.

Announce to the class that you want them to write on their slates, inside of ten or fifteen minutes, all the words in the reading lesson of, say, five or six letters. They may not have all the words, but it insures a pretty busy time during those ten or fifteen minutes. Insist on correct spelling. This is busy work with a purpose, as the attention my thus be called to all the longest words in the lesson. This device may frequently be given a class, and whenever it is given them it ensures an interest in the lesson.—*Primary Education*.

If nothing more can be done, train all your pupils to sing a number of hymns and appropriate songs. The monotony of school exercises and the noise of uneasiness may both frequently be corrected by means of a cheerful song. If the teacher cannot sing, he should form a singing club in his school and appoint some pupil leader, who may be called upon by the teacher at any time to lead the singing.—*Dr. A. N. Raub*.

A mother made the remark not long since that if the teachers would teach her children how to study their lessons, she herself would be willing to hear them recite.

The wisest teacher we ever knew, the one most beloved by the hundreds of boys who came under his influence, never flinched from inflicting corporal punishment when he knew it was the wisest remedy. Few men loved children or watched over them more tenderly than he, but he never allowed any false sentiment to blind him on this point, and the lives of many men today are the better for that fact.—*Ex.*

A short time ago the Russian minister of education issued a circular giving instructions that the study of chess should be added to the curriculum of schools. In an article in one of the German papers, Dr. Tarrasch, the chess expert, of Nuremberg, declares that chess is of the greatest possible use in forming a character, in inculcating prudence and judgment, in awakening thoughtfulness and the imagination, and in adding to the exercise of thought the very necessary attributes of clearness and consistency. He advocates not only the teaching of chess as a regular branch of education in Germany, but the giving of prizes or other rewards for proficiency therein.

Ask your friends if they can write down five odd figures to add up and make fourteen. It is really astonishing how engrossed most people will get, and how much time they will spend over this, at first sight, simple problem. The questioner, however, must be careful to say figures, and not numbers. Here is the answer:

II
 I
 I
 I
 —
 I4

CURRENT EVENTS.

Despite the war and turmoil of the present day the cause of international arbitration continues to gain ground. The nations that are now agreed to submit their disputes to arbitration are Britain and France, Britain and Italy, France and Italy, and a treaty just announced between France and Spain. Belgium and the Netherlands are understood to be arranging similar treaties with Britain. France and Italy and Spain and Portugal have come to a like understanding with Britain and each other. It seems quite probable also, that Britain and France will soon enter into treaties of arbitration with the United States.

The war in the east is in progress. Russia and Japan are in deadly conflict. As news is being suppressed by both sides it is impossible at the moment to give an accurate idea of the situation. Japan's masterly initial stroke at Port Arthur, followed up by other deeds of daring, has crippled the Russian fleet and given the command of the sea to the island nation. This allows her to move her transports at will and large bodies of her troops are now at Seoul and other points in Korea. Here they have the advantage of being among friends, as Japan and Korea have completed a treaty, by which the latter places herself practically in the hands of the former, and Japan guarantees the independence and territorial integrity of Korea. Acting upon this treaty, the Korean government is said to have ordered its troops into the field to the support of Japan. The standing army of Korea consists of seventeen thousand men, with European methods, having been drilled by Russian officers. It is the uncertainty as to the ultimate disposition of Korea which has led to the present strife. At the close of the war between Japan and China, the latter agreed that Japan should occupy Port Arthur. To this Russia objected, and she succeeded in getting other powers to join her in the protest so that Japan was forced to give up this strong strategic point. Almost immediately Russia got possession of the place and proceeded to fortify it. This with her persistent continued occupation of Manchuria in spite of all promises to retire therefrom, led Japan to fear her encroachment on Korea; and the occupation of this peninsula by a hostile power would threaten the national existence of Japan. As in the case of the China-Japanese war, the scene of land operations between the present opposing forces will be the northern part of Korea. Just what strength the active support of Korea will yield to Japan is problematical, although the friendly feeling of the inhabitants, both there and through Manchuria, will make the way behind the advancing

Japanese comparatively safe, while the Russians will be obliged in all their operations to leave strong guards along their route to protect them from an unfriendly citizenship. The Koreans in olden times gave a good account of themselves in warfare, but are now described as the most gentle, lamb-like creatures, and essentially a nation of repose. Whether the present situation, where they seem to be disposed to suit the purposes of their neighbors, will infuse into them any national life and energy remains to be seen. The strength of the coolie is said to be phenomenal. He will carry a bale of goods of four hundred pounds weight for miles and is really the beast of burden of the country, as there are few carts and few roads fit for them. In the meantime China is displaying a restless activity, and Chinese troops are said to be moving north into Manchuria. The success of Japan at the outset has doubtless made an impression on the Chinese, and as they are supposed to resent the continual encroachments of Russia, a cancellation of their declaration of neutrality may occur at any time.

Baltimore has now the distinction of being the scene of one of the great fires of the world. The business portion of the city, including many of the best modern "fire-proof" buildings, has been completely demolished. War experts were sent by the federal government with large quantities of gun-cotton and assisted in fighting the fire by blowing up buildings in the district. The money loss is tremendous, but strange to say only one death is reported, and practically no one was rendered homeless, although it is estimated that 50,000 people were thrown out of employment.

The nickel supply of the world is at present derived from two sources, the most important of which is the Sudbury district in Ontario, the other being the French penal colony of New Caledonia in the Southern Pacific. As nickel is now indispensable in the manufacture of modern armor plate and guns, the government of Ontario has withdrawn from sale a large tract of land in the nickel district, with the hope that the Imperial Government will acquire it and reserve the nickel for its exclusive use. Should the British government do this it is not unlikely that France will take similar steps in regard to its nickel supply, and thus place all the nickel output in the hands of these two nations.

The governor of German East Africa, in a recent visit to the interior, used a young zebra as a saddle animal, and found that he climbed hills and waded rivers more readily than the mules. He is now gathering a number of these animals to be broken to service, and thinks that they can be kept more cheaply and will be less liable to sickness than mules.

The Board of Trade of Sydney, N. S., has passed a resolution urging that Canada should acquire the islands of St. Pierre and Miquelon.

The last battalion of United States soldiers has been removed from Cuba. The insurgents in San Domingo continue to make trouble, and in the course of their depredations recently fired on a steamship while she was discharging cargo. This provoked a reply from a United States cruiser, which shelled the camp of the insurgents and landed a force of marines to drive them back.

Dr. Jameson, who was perilously near the scaffold on account of his leadership in the raid on Johannesburg, in 1896, has recently become prime minister of Cape Colony. Time makes marvelous changes in the affairs of men.

A curious effect of the Ismalia Canal in Egypt has been the making of a desert of certain lands formerly fertile. The canal has not only raised the general level of the subsoil water, but it has brought to the surface more or less injurious salts of soda.

By a recently invented process in Germany the casein in skim milk is being utilized in the manufacture of a substance called galalith. This resembles horn or celluloid and is made into combs, knife and fork handles and such articles. It can be made to imitate marble, or in black is a good representation of ebony. It is light, entirely odorless and will not ignite so readily as celluloid.

The federal assembly of Porto Rico, by a vote of 60 to 15, has demanded that the island be admitted to statehood or be granted independence. Here is a new difficulty for our neighbors.

During the past year the number of ships equipped with the Marconi system of wireless telegraph has been increased from 25 to 54, and efforts are now being made to increase the number of land stations. Arrangements have been made for several stations on the St. Lawrence for the sake of safety in navigation.

One of the youngest and most promising of South and Central African industries is cotton growing, and its cultivation is being tried also in Rhodesia. It is possible that within a few years the industry will be in serious rivalry with the American plantations. Within the several colonies of Great Britain can be produced all that is required for the well-being and comfort of the vast population of the Empire.

The United States Senate has ratified the treaty with Panama, and the building of the great canal will be at once pushed forward.

Manual Training.

Another recruit is added to the ranks of countries which have made manual training a part of their educational system. This time it is the "ancient colony," Newfoundland, and our members may be proud to know that the honor of opening the first manual training department in the island will fall

to one of their number. Mr. Clifford W. Fairn, assistant instructor in the Truro school, has been appointed teacher by the Methodist Board of Education, and is now in St. John's organizing for the opening of a school in that city at an early date.

It is somewhat appropriate that the teacher should have been chosen from the Truro school, for the manual training movement in Newfoundland received great impetus from the visit of a prominent citizen of St. John's to the MacDonald school in Truro in the spring of 1901. The commission sent to Canada from Newfoundland by the Anglican Board of Education last year also visited Truro, and in consequence of the commission's report, a teacher of St. John's, Mr. J. Samson, of Bishop Field College, was selected to be trained as a teacher of manual training. By the courtesy of the Nova Scotia Department of Education, Mr. Samson is at present in Truro, taking the course of training at the Provincial Normal School. After completing his course he will return to St. John's to organize manual training for the Anglican Board of Education. May there be a healthy rivalry between the two schools, which will result in the very best being done for the pupils and the subject.

In addition to his other duties, Mr. Fairn conducted a successful evening class in architectural drawing in the Truro Y. M. C. A. Mr. and Mrs. Fairn made many friends in Truro, whose good wishes will follow them to their new home.

The manual training departments at the MacDonald consolidated school at Middleton are being fitted. Mr. Reginald W. Bent, a graduate of the 1903-4 course in the Normal School, Truro, has been appointed instructor in mechanic science.

Mr. Alden W. Falconer, also a graduate of the 1903-4 course, just concluded, has been appointed by the Truro school board in Mr. Fairn's place.

An envoy from China, who has been spending the last two years in the United States enquiring into educational matters, is now in England upon the same business. He will take back some organizers of manual training among his other contributions from western ideas, as he has been greatly impressed with our methods of "practical" education, especially the kindergarten and manual training system. "May his shadow never grow less" in this good cause of education and (consequent) emancipation of the teeming millions of his fellow countrymen.

Those manual training teachers who think it rather difficult to teach grade VI pupils, would have that impression removed were they to visit the manual training department presided over by Mr. Leonard Goucher at the Deaf and Dumb Institution, Halifax. Mr. Goucher has to deal with children of all ages, and in all stages of educational development. The deaf mutes must be communicated with by finger spelling, signs or blackboard writing. Their knowledge of arithmetic is very meagre, and their language very imperfect, except in the case

of the advanced pupils. The children's ignorance of arithmetic makes it hard to teach the divisions of the ruler and measurements in general. The inexperienced pupils stand wondering, but as they gain experience, improve quite rapidly, as is evidenced by the good work shown at the closing of the institution last June. Manual training here is used to a great degree in teaching language which to the deaf mutes is more important than the primary objects of manual training. Any of the visiting teachers can spend a profitable hour in Mr. Goucher's department.

Principal Miller, of the Dartmouth schools, and H. W. Hewitt, manual training teacher at the same place, waited on President Longley, of the Exhibition Association, last month in reference to an improved and more representative educational exhibit. The president and secretary received the proposal favorably, and the commissioners at their next meeting decided to offer the prizes asked for, amounting to \$50. Most of the manual training teachers of the province have signified their intention of exhibiting, and a splendid exhibit is expected.

Address all communications for this page to H. W. Hewitt, Secretary M. T. T. A. of N. S., Dartmouth, N. S.

Manual Training Course.

N. B. Normal School, April 4 to July 1, 1904.

It has been decided to have a third special course in manual training at the New Brunswick Normal School from April 4th to July 1st, 1904.

These courses, it will be remembered, are for the purpose of affording opportunity to teachers of rural and village schools to fit themselves for teaching manual training in their schools.

There is an additional government grant to such teachers of fifty dollars (\$50.00) per year. The travelling expenses incurred in taking the course are paid in the same way as to the regular student teachers of the Normal School.

Teachers wishing to attend should make application to Mr. E. E. MacCready, Director of Manual Training, Fredericton, N. B.

'ROUND TABLE TALKS.

I know the REVIEW will pardon me for saying that I do not think its very meagre answer to "Teacher's" question, No. 3, in February REVIEW, page 237, conveys sufficient information to be of any aid in the solution of the problem. The following might assist "Teacher" in solving this and similar questions:

$\frac{1}{2}(18+13) \div 12 = 1.295$ av. diam.
 $1.295 \times 3.1416 \times 16 \times .05 = \3.25 , cost of lowest section.

$\frac{1}{2}(13+8) \div 12 = .875$ av. diam.
 $.875 \times 3.1416 \times 15 \times .05 = \2.20 , cost of middle section.

$.458 \times 1.3 \times 3.1416 \times 16 \times .05 = \1.15 , cost of upper section.
 C. E. LUND.

S. What will be the effect of the mutual impact of two inelastic bodies of equal weights, whose velocities in opposite directions are as 1 : 2? (Eaton's Practical Mathematics, question 59, p. 89).

Suppose w = weight of each;
 then $w \times 1 = w$ = momentum of 1st,
 and $w \times 2 = 2w$ = momentum of 2nd.

$2w - w = w$ = momentum of 2nd after impact.

Since, after impact, the two bodies move in the same direction, and all the power is now supplied by the momentum of the 2nd,

Therefore $2w \times v = w$. (Here $2w$ = weight of the two bodies and w = momentum of second after impact.)

$$v = \frac{w}{2w} = \frac{1}{2}$$

INQUIRER.—How can the school library be made to reinforce the work of the school, so that the scholars will have the recitations better prepared and be led to take more interest in their studies generally?

Every school library however small should have a few works of reference, books of travel, history, stories by standard authors, and the works of some of the best poets. In hearing recitations and giving out home lessons the teacher should encourage the children to make use of the books that bear upon certain points or references in the lesson. Teachers can do this only as they themselves are familiar with the books. Scholars who have their lessons well prepared, and whose punctuality and deportment are excellent, may be allowed a certain portion of time each week for reading. Every book, therefore, for a school library should be chosen with the definite objects of helping along the work of the school, arousing in the pupils a taste for good reading, placing before them the examples of the noblest conduct—love for others, heroism, unselfishness, honesty, and other cardinal virtues.

A. Y.—Will you kindly inform me by whom the "Charge of the Gordon Highlanders" was written, and where the D'Argai Heights, the place taken by the Highlanders, is situated?

Can any of the readers of the REVIEW answer this question?

SCHOOL AND COLLEGE.

IN THE case of the six University of New Brunswick students charged with disturbing the opening exercises of the Normal school, Fredericton, one was fined \$20 and the others \$10 each. At the request of Principal Crocket the fines were allowed to stand on condition of future good behaviour. The police magistrate in awarding judgment said that university students must be taught that they cannot with impunity disturb the work of other institutions. One would naturally suppose that this judgment ought to be reached outside of a police court.

Miss Jeanette Cann, of Yarmouth, formerly a teacher in the Kentville Academy, has secured a position with a salary of \$1,000 in the high school of Victoria, B. C.

Mr. Arthur H. Shea, B. A., of Fredericton, while laboring under a fit of temporary insanity, left his home early in the morning of February 21, and two hours later was found in a snow bank in a naked and semi-conscious condition, with both legs frozen. He was quickly removed to the Victoria Hospital, Fredericton, and though his life was despaired of for several days he is now in a fair way of recovery. Mr. Shea was formerly principal of the grammar school at Andover, and later taught in St. Malachi's school, St. John.

A convention of leading Acadians was held at Moncton, N. B., in February, to consider the adoption of a uniform system of French text-books in the public schools, and the improvement of the French department in the Normal school. Among the resolutions passed was one to the effect that in purely Acadian districts the French language would be preferable for children for the first few years in order to prepare them the better to learn English. To this end special French text-books should be prepared and adopted. To present their views to the Board of Education a committee was appointed consisting of Judge Landry, P. J. Venoit, Dr. E. T. Gaudet and Inspectors Doucet and Hébert.

In the near future it is expected that five thousand students will be enrolled in Harvard University. How to house such a small army and how to govern them are grave problems. More important, perhaps, is the question how to bring any personal influence to bear upon them to build up well proportioned and cultured characters. There is no gain to the student in being one of such an immense throng. In this respect the small college stands superior.

Chatham, N. B., *World*: Mr. Jas. McIntosh, one of the town teachers, having refused to accept an excuse signed by a pupil's sister, even though he had been informed verbally and in writing by the father that the young lady was authorized by him to sign it, the school board was asked to deal with the matter. The teacher seemed, from the documents submitted, to hold the opinion that such an excuse did not meet the requirements of the law that says an excuse shall be signed by the parent or guardian of the pupil. The school board passed a resolution, unanimously, instructing the teachers of the town to accept, in the future, excuses signed by a member of the pupil's family when they know that the signer has been authorized by the parents to sign such excuses.

Mr. Goodriche, who was elected president of King's College, Windsor, in December last, is found to be unqualified for the position in one particular, a particular, however, that does not affect his scholarship or personal standing. The committee appointed by the board of governors will still continue its search for a president.

Through the efforts of the school trustees in District No. 4 White's Mountain, Kings, Co., N. B., Miss Agnes E. Reynolds, teacher, a new map of the Dominion of Canada and a set of minerals have been obtained for the use of the school.

RECENT BOOKS.

ELEMENTARY PLANE GEOMETRY. By Alfred Baker, M. A., Professor of Mathematics, University of Toronto. Cloth. Pages 146. W. J. Gage & Co., Toronto.

This book provides an excellent course for pupils in the earlier stages of study of geometry. One good feature is its correlation of work. Besides giving the pupil a firm grasp of geometrical principles in an easy and natural way, the author insists on accurate measurement and computation at every step, correct drawing of geometrical figures, and the use of instruments, thus connecting the study of geometry more intimately with manual training.

NINETEENTH CENTURY PROSE. Edited with notes by John W. Cunliffe, D. Litt. (University of London). Cloth. Pages 32. The Copp, Clark Company, Toronto.

The purpose of this book is to interest young people in a few authors, such as Charles Lamb, Macaulay, Ruskin, Stevenson, and others, by giving carefully annotated selections from their works. By confining the student to a few choice extracts, he is inspired with a desire to know more good literature with the ambition to express his own thoughts in choice language.

TALKS ON COUNTRY LIFE. No. III. By H. B. M. Buchanan and R. R. C. Gregory. Cloth. Pages 198. Macmillan & Company, London.

This volume conveys to children of the third or fourth year at school useful information about domestic and wild animals of England, told in simple language and with a brevity and directness always pleasing to the child. Take the following example from the chapter, Off to Market: "Take the reins and drive. Don't forget the rule of the road, as we call it. If you meet a trap (wagon) or anything, pull the left rein so that it passes you on the right. If anything from behind wishes to pass you, then again you must pull the left rein and let it go by on the right hand side. But if you want to overtake something that is in front of you, you must pull the right rein and pass it on the right."

SCHÜCKING'S DIE DREI FREIER. Edited by Professor Otto Heller, Washington University, St. Louis. Cloth. Pages xxiii + 81. Ginn & Company, Boston.

Die Drei Freier (the three suitors) contains a brief memoir of the author and a literary-historic discussion of three famous legends — The Wandering Jew, The Wild Huntsman and the Flying Dutchman. It is well adapted to the needs of younger students of German, and will furnish interesting sight-reading for those more advanced.

HANDBOOK OF PARLIAMENTARY USAGE. By Frank William Howe. Hinds & Noble, publishers, New York.

A unique and valuable handbook arranged for the instant use of meetings, clubs and fraternal orders, teachers, students, and all who desire to conduct themselves "decently and in order" in public discussions.

THE SONG OF ROLAND. Translated into English prose by Isabel Butler. Paper. Pages 156. Illustrated. In The Riverside Literature Series. Houghton, Mifflin & Company, Boston.

All interested in stories of early warlike adventures will be glad to get this historic Song of Roland, which takes

If you are a total abstainer this company will offer you advantages which no other man can get and which no other company can offer. We know that we can show you how to make money out of your abstinence.

Send us a card stating your age next birthday and we will send you some information which we are sure will interest you.

The Manufacturers' Life Insurance Company, Toronto.
Business in Force, over \$30,000,000.

The E. R. MACHUM CO., Ltd., ST. JOHN, N. B.
Managers for Maritime Provinces.
AGENTS WANTED.

YES! There are other schools,
BUT you should go to the best.
WHY always regret because you did
NOT attend that good school?

MARITIME BUSINESS COLLEGE,
HALIFAX, N. S.
KAULBACH & SCHURMAN,
CHARTERED ACCOUNTANTS.

**MAPS, GLOBES
AND SCHOOL
SUPPLIES.**

Our New Catalogue may be had for the
Asking.

We now have the ENTIRELY NEW EDITION of the
HOWARD VINCENT

MAP OF THE BRITISH EMPIRE.

Send for small fac-simile reproduction of same.

KINDERGARTEN MATERIAL Send for Special Catalogue.

THE STEINBERGER, HENDRY CO.,
37 RICHMOND STREET, WEST. - - TORONTO, ONT.

us back to the field of Senlac, where the Minstrel Taillefer rode before Duke William, "singing of Roland and of Charlemagne." The introduction contains an excellent account of the origin of the *chanson de geste* (song or epic of history).

ENGLISH POEMS. Edited by Professor J. G. Jennings, M. A., Muir Central College, Allahabad. Macmillan & Company, London.

In two small low-priced volumes, with notes, are arranged a series of some of the best and most popular English poems for the use of schools.

Notes to Palgrave's Golden Treasury of Songs and Lyrics, Books I-IV (Macmillan & Company, London), published in one volume, cloth, 250 pages, will prove a valuable aid to students.

THE LEADING FACTS OF FRENCH HISTORY. By D. H. Montgomery. Cloth. Pages 328 + xxvii. Illustrations, maps and full tables. Ginn & Company, Boston.

The object of this volume is to present the most important events of the history of France, selected, arranged and treated according to the soundest principles of historical study, and set forth in a clear and attractive narrative.

The career of Napoleon and its effects on France and Europe are carefully examined; and a sketch is given of the stages of the historic progress of France in connection with the state of the Republic to-day, bringing the history down to the year 1903.

THE MAN WHO PLEASES AND THE WOMAN WHO CHARMS.
By John A. Cone. Cloth. Pages 131. Hinds & Noble, New York.

The author has put into form for service, matters touching the daily intercourse of humankind—the niceties of courtesy, the demands of dress, of tact, of graces of conversation and address, of the voice, the attitude and the general bearing. The view of life is hearty and joyous, and the whole purpose and influence of the book, healthy and happy.

A Series of Western Educational Helps and Practical Aids to Literature, published by the Whitaker & Ray Company, of San Francisco, California, has been received. The series includes hints on the study and teaching of *Evangeline*, *Lady of the Lake*, *Merchant of Venice*, *Snowbound*, *The Vision of Sir Launfal*, and other practical aids to literature.

HARVARD UNIVERSITY

SUMMER SCHOOL OF ARTS AND SCIENCES

offers courses for men and women in Greek, Latin, English, Elocution, German, French, Spanish, History, Economics, Psychology, Philosophy, Education, Architectural Drawing, Music, Mathematics, Surveying, Shopwork, Physics, Chemistry, Botany, Geology, Geography, and in Physical Education. These courses are open without entrance examinations to all qualified persons. They are primarily designed for teachers. The University Libraries, Museums, Laboratories, etc., will be at the service of members of the Summer School. The School opens Tuesday, July 5th, and closes Friday, August 12th, 1904. For full Announcement of courses offered and information about expenses, address the Clerk of the Summer School, J. L. Love, 16 University Hall, Cambridge, Mass.

N. S. SHALER, *Chairman*.

HARVARD UNIVERSITY

THE LAWRENCE SCIENTIFIC SCHOOL

offers four-year courses of study leading to the degree of S. B. in Civil, Mechanical, and Electrical Engineering, Mining and Metallurgy, Architecture, Landscape Architecture, Forestry, Chemistry, Geology, Biology, Anatomy and Hygiene (preparation for medical schools), Science for Teachers, and a course in General Science. Students are admitted to regular standing by examination and by transfer from other Schools or Colleges. Approved Special Students may be admitted without examination. The Catalogue will be sent on application to the Secretary, J. L. Love, 16 University Hall, Cambridge, Mass.

N. S. SHALER, *Dean*.

CORNELL SUMMER SESSION.

JULY 7--AUG. 19, 1904.

118 Courses in 23 Departments.

Special Mention: Over 30 Courses in Geography and Nature Study for Grade and High School Teachers. Tuition Fee \$25.00. Knowledge, Health, Pleasure.

Send for Circular and Book of Views.
Address: The Registrar, CORNELL UNIVERSITY,
Ithaca, N. Y.

SUMMER SCHOOL OF SCIENCE.

EIGHTEENTH SESSION.

July 12th.

July 29th.

— AT —

Charlottetown, P. E. I.

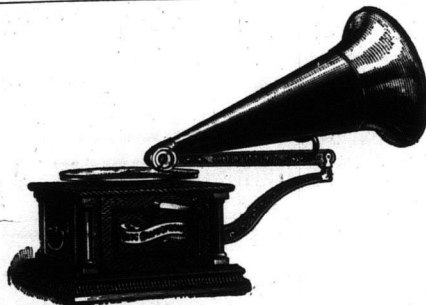
Courses in Physical and Biological Sciences.

11 Professors. 14 Courses. Tuition Fee, \$2.50.

Expenses reduced to a minimum.

For Circular, address

J. D. SEAMAN,
Secretary of Summer School,
Charlottetown, P. E. I.



GRAPHOPHONE

'S INDISPENSABLE FOR ENTERTAINING IN SCHOOLS, LODGES, CLUBS, SOCIAL GATHERINGS, etc., as well as in the HOME.

IT PLAYS! IT SINGS! IT TALKS!

Columbia Graphophones and Records
excel all others.

Write for agency in unoccupied territory.

YARMOUTH CYCLE CO.,
YARMOUTH, N. S.

MARCH MAGAZINES.

Doctor Henry A. Stimson's article in the *Atlantic*, The Small Business as a School of Manhood, treats the gradual elimination of small firms and independent employers by great trusts and corporations, which involves the loss to the nation of a class of independent, self-supporting business men, to the country's great injury. . . . Forty Canadian teachers went to South Africa, and their experiences are commemorated in an article entitled, A Year in a Boer School, in the March number of the *Canadian Magazine*. Canada's treaty-making powers are termed inadequate, and Thomas Hodgins briefly explains why he agrees that it is time for a change. W. L. Grant points out where the teaching of history is weak, so far as our educational system is concerned. Added to these are three Canadian short

stories, and the usual departments. . . . In an article on Reading for children in the March *Delineator*, Mrs. Theodore W. Birney sums up the following "best books:" Gulliver's Travels, Alice in Wonderland, Hawthorne's Wonder Book, The Arabian Nights, The Water Babies, Tanglewood Tales, Tom Brown at Rugby, The Jungle Book, Aesop's Fables, Uncle Remus, Pilgrim's Progress, Robinson Crusoe, The Swiss family Robinson, and the Waverley Novels. . . . People who feel an inclination, as most people do, to "read up" on Japan, Korea and Russia, and their relations and entanglements, will find in *The Living Age* for March 5, a very serviceable classified list, several pages long, of the freshest and most accessible books on these countries. The article on The Most Corrupt City in the World which *The Living Age* for February 20 reprints from *The National Review*, accords the doubtful distinction expressed in the title to Philadelphia and cites an abundance of evidence to justify it.

The teacher who has had considerable experience in the schoolroom finds the following a good device in many ways. Select some interesting story from a book which is not familiar to the pupils. Let all the members of the reading class be prepared with pencils and paper. While one pupil is reading a paragraph, let the other be taking notes. Pass the book around, letting each pupil read but a single paragraph. After the story is finished, let each pupil write a reproduction story from the notes he has taken. This will furnish help in many ways, teaching pupils to take notes, pay close attention to the reading, writing, spelling and composition work.—*Ex.*

Nothing that you can do for children to take home will be as grateful to the parents as the school work of the children, tastefully prepared. To teachers children's work is an old story, and perhaps poor at that. To the parents they are a prize,—“what my child did at school.”

GET THE BEST

WEBSTER'S INTERNATIONAL DICTIONARY

TRADE MARK

English Biography Geography Fiction, Etc.

25,000 NEW WORDS, Etc.

New Gazetteer of the World
With over 25,000 entries based on the latest census.

New Biographical Dictionary
Over 10,000 names of noted persons, birth, death, etc.

Edited by W. T. HARRIS, Ph.D., LL.D.,
United States Commissioner of Education.

New Plates. 2380 Quarto Pages.
Rich Bindings. 5000 Illustrations.

Every School and Teacher Should Own a Copy.

Also Webster's Collegiate Dictionary with 1100 pages. 1400 Illustrations. Size: 7x10x2 5/16 in.

A Special Thin Paper Edition
Printed from the same plates as regular edition. It has limp covers and round corners. Size: 8 3/4 x 11 1/2 in.

FREE, "A Test in Pronunciation," instructive and entertaining. Also illustrated pamphlets.

G. & C. MERRIAM CO.,
Publishers, Springfield, Mass.

CANADIAN PACIFIC

Commencing March 1st and until April 30, 1904.

SPECIAL COLONIST RATES
TO BRITISH COLUMBIA and PACIFIC COAST POINTS

—FROM—
ST. JOHN, N. B.

To VANCOUVER, B. C.	}	\$56.40
VICTORIA, B. C.		
NEW WESTMINSTER, B. C.		
SEATTLE & TACOMA, WASH.		
PORTLAND, ORE.		
To NELSON, B. C.	}	\$53.90
TRAIL, B. C.		
RUSSELL, B. C.		
GREENWOOD, B. C.		
MIDWAY, B. C.		

Proportionate rates from and to other points.
Also rates to points in COLORHDA, IDAHO, UTAH, MONTANA and CALIFORNIA.

For Full Particulars call on
W. H. C. MACKEY.
Or write to **C. S. FOSTER.**
P. O. BOX 100, ST. JOHN, N. B.

IMPORTANT ANNOUNCEMENT
NEW TEXT BOOK FOR PUBLIC SCHOOLS.
HISTORY OF THE MARITIME PROVINCES

BY JAMES HANNAY.

George N. Morang & Company, Limited, beg to announce to the Teachers of the Maritime Provinces that they have on the press a **HISTORY OF THE MARITIME PROVINCES, FOR PUBLIC SCHOOLS**, by Mr. James Hannay, of Fredericton.

It is not necessary to say anything about Mr. Hannay's exactness as an historian or the quality of his literary style. The book has been thoroughly revised by leading educationists, and will, when published, take its place among the best text-books yet issued on the subject of history. The publishers are sparing no pains on the mechanical side. The book will be superbly illustrated and tastefully bound. A further announcement will be made later.

IN PREPARATION.
A GEOGRAPH OF THE MARITIME PROVINCES.

This book will be the second of the Provincial Geographies issued by the publishers. Others are in preparation. Send for pamphlet—"The Study of Geography," which gives full information.

GEORGE N. MORANG & COMPANY, LIMITED, 90 WELLINGTON STREET, W.
TORONTO, ONT.

DOMINION ATLANTIC RAILWAY.

Royal Mail Steamship "YARMOUTH," ST JOHN AND DIGBY.
 Leaves ST. JOHN Monday, Wednesday, Thursday and Saturday at 7.45 a. m., arriving in Digby at 10.45 a. m., making close connection with Express Trains for Halifax and Yarmouth.
 Returning, leaves Digby Monday, Wednesday, Thursday and Saturday at 2 p. m.
 Royal and U. S. Mail Steamship "BOSTON," leaves Yarmouth Wednesday and Saturday on arrival of Express Train from Halifax, arriving in Boston early next morning. Returning, leaves Long Wharf, Boston, Tuesday and Friday at 2 p. m.
 Parlor Cars are attached to Express Trains running between Halifax and Yarmouth, where connection is made with the Halifax and Yarmouth Railway.
 For all information, folders, plans of stateroom accommodation, exquisitely illustrated guide books, tourist pamphlets, etc., gratis and post free, apply to Dominion Atlantic Railway Office, 14 Prince William Street, or New Pier, Reed's Point, St. John.

Kentville, N. S. P. GIFFKINS, Gen'l Manager.

REPAIRING JEWELLERY

Do not hesitate to send us your Jewellery repairs. We are anxious to do them for you, no matter how trivial they may be. We employ only high class workmen and have gained many customers in this department through our neat work, prompt attention and moderate charges.
 Repairs from out-of-town customers will receive careful attention, and a report sent by return mail.

M. S. BROWN & CO.,
 Watchmakers and Manufacturing Jewellers,
 Halifax, - Nova Scotia.

Know the Maritime Provinces

Your Own Line

— THE —
Intercolonial Railway's PUBLICATION

Contains valuable information for teachers and students regarding the country traversed by its rails.

Write to— JNO M. LYONS, General Passenger and Ticket Agent, Moncton.

SLATE BLACKBOARDS.

CHALK CRAYONS, SCHOOL SLATES, SLATE PENCILS, LEAD PENCILS, SCHOLARS' COMPANIONS.

W. H. THORNE & CO, Limited
 HARDWARE MERCHANTS,
 Market Square, SAINT JOHN, N. B.

The Standard of the World

IN the manufacture of School Furniture we are many laps ahead of our competitors. For durability, honesty of construction, and superior points of merit, our goods EXCEL ANYTHING IN THE SCHOOL FURNITURE LINE.

Our New Patent "Ball Bearing" School Desks stand all others. They are absolutely the ONLY School Desks ever made having a Permanently Noiseless Ball Bearing Seat Hinge.

This device is NOT an experiment, but has been thoroughly tested, and its practicability proved.

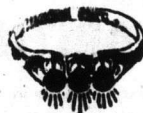
Our Combination "Ball Bearing" Adjustable School Desk is the greatest success ever achieved in School Desk construction.

The time has passed when students must adjust themselves to fit the desks. Health and comfort demand that the desks should adjust themselves to fit the students.

That is why our Adjustable Desk should be in every school room in the land.

Write for Catalogue.

Canadian Office and School Furniture Co., Ltd.
 PRESTON, ONTARIO, CANADA.



DIAMONDS & OPALS
 Gold Chains, Bracelets, Watch s. Sterling Silver Goods at
 A. & J. HAY'S, 70 King Street St. John, N. B.

CANADIAN HISTORY READINGS

May be used as supplementary to readings in Canadian History. Over 350 pages from interesting and important topics. Price \$1.00. To subscribers of the Review, 75 cents.

SEND TO Educational Review, St. John, N. B.

CHEMICALS

... AND ...
CHEMICAL APPARATUS

SUPPLIED TO SCHOOLS AND TEACHERS ON FAVORABLE TERMS.

BROWN & WEBB

Wholesale Druggists. HALIFAX, N. S.